CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8300.10 CHG 5

12/14/90

SUBJ: AIRWORTHINESS INSPECTOR'S HANDBOOK

1. PURPOSE. This change transmits new and revised portions to this handbook.

2. EXPLANATION OF CHANGES.

a. This change includes minor corrections to the following chapters, which were also reorganized for clarity: Volume Two, Chapters 26, 76, 87, 88, 101, 102, 147, 156, 220; Volume Three, Chapters 26 and 105.

b. This change incorporates Action Notice 8610.1 into Volume Two, Chapter 22. It also incorporates Action Notice 8300.76 into Volume Two, Chapter 78. As these Action Notices have been made a part of this Order, they are therefore cancelled.

c. This change reissues pages from Volume Two, Chapters 68 and 163, which were included in Change 4 but inadvertently printed out of sequence.

d. This change adds Volume One, Chapter 9 on certificate numbers; Volume Three, Chapter 43 on ETOPS inspection; and, Volume Three, Chapter 44 on maintenance records.

e. This change includes the following chapters on maintenance records, which were rewritten and coordinated: Volume Two, Chapter 111; Volume Three, Chapters 27, 42, and 61. Volume Two, Chapter 82, on ETOPS, was also rewritten and coordinated.

f. Two chapters on FAR Part 91 certification were rewritten as surveillance chapters and moved to the appropriate volume. Volume Two, Chapter 36 becomes Volume Three, Chapter 26, and Volume Two, Chapter 38 becomes Volume Three, Chapter 27.

g. Two new Volume Four chapters provide reference information. Chapter 2 lists Action Notices and their status, along with PTRS codes. Chapter 3 compares Orders 8300.9 and 8300.10.

h. Appendix 1, Index, was updated, and Appendix 2, the inspector feedback sheet, was corrected for clarity.

3. DISPOSITION OF TRANSMITTAL. This transmittal is to be RETAINED AND FILED IN THE BACK OF THIS HANDBOOK until superseded by a new basic order.

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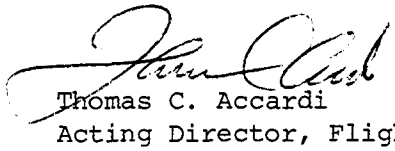

Thomas C. Accardi
Acting Director, Flight Standards Service

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CHAPTER 9 AIR OPERATOR/AGENCY CERTIFICATE NUMBERS

1. GENERAL. The Operational Systems Branch, AVN-120, manages and controls all air operator and air agency certificate numbers. AVN-120 provides a standardized format, a multitude of possible numbers, and a central location for assigning, storing, and retrieving information.

3. ELEMENTS OF A CERTIFICATE NUMBER

A. *Four Elements of a Certificate Number.* A certificate number consists of four elements: the "designator" element, the "type" element, the "numeric" element, and the "alpha suffix" element. For example, the air operator certificate number RWI-L-001-A consists of the following:

(1) *RWI (designator element).* The "designator" element is a designation using a combination of three letters. An air operator or air agency applicant may request a specific three-letter designator to personalize the designator received.

(a) Applicants under FAR Parts 121, 125, 135, 145, 147, or 149 should submit three choices on the Preapplication Statement of Intent.

(b) Applicants under FAR Parts 129, 133, 137, or 141 should submit three choices in the letter of intent and/or on the respective application forms.

(c) AVN-120 shall attempt to accommodate the applicant's request. If all three choices have already been assigned or if the applicant does not provide any choices, AVN-120 will issue the first random designator available.

(2) *L (type element).* The "type" element identifies the type of certificate and the applicable regulation. When an organization has several types of operations with different types of certificates, each certificate will have the same three-letter designator with the "type" element ensuring the differentiation. For a complete breakdown of "type" elements, see Figure 9-1.

(3) *001 (numeric element).* The "numeric" element provides 999 (001 to 999) certificate number combinations for each type of certificate.

(4) *A (alpha suffix element).* The "alpha suffix" element provides even more possible combinations by establishing 25 alphabet groups (A through Z, excluding P, which is used to denote a precertification number for FAR Parts 121, 125, 135, or 145 only).

(a) When all possible number element combinations (001 to 999) have been used for a specific type of certificate, either air agency or air operator, the alpha suffix changes to a letter chosen by AVN-121.

(b) For example, an external-load operator is assigned the certificate number ELO-L-999-A. The next air operator to obtain a certificate number, regardless of the designator element, might get XYZ-B-001-B.

B. *Certificate Commonality.* This number system allows an operator holding several different types of certificates to maintain a certain amount of commonality in certificate numbers. For example, an air operator who is also an air agency will have the same designator prefix as well as the same certificate number suffix. The fourth letter of the designator differentiates the type of operation.

Number: RWI-L-001-A

Elements: RWI - Rotorworks International
L - External-Load Operator
001 - First certificated external-load operator
A - AVN-121 assigned air operator suffix

Number: RWI-R-002-B

Elements: RWI - Rotorworks International
R - Repair Station
002 - Second certificated repair station
B - AVN-121 assigned air agency suffix

5. PRECERTIFICATION NUMBERS. The letter "P" is used as the alpha suffix element for the temporary precertification numbers used for FAR Part 121, 125, 135, or 145 applicants. Upon successful completion of the certification process and the issuance of the actual certificate number, the

"P" is changed to the appropriate alpha suffix element (A through Z, excluding P).

NOTE: The exception to this is FAR Part 145. When a FAR Part 145 precertification number is assigned, the actual certification number, although inactive, is assigned at the same time.

7. RESTRICTIONS

A. *Number Assignment.* The complete certification number (all eight characters), once assigned to a particular organization, is never assigned to another.

B. *Reassignment of Designators*

(1) Regardless of the type of certificate, the designator element of an organization that has become inactive or that has terminated operations shall not be reassigned to a different organization for at least three years. During the three year period, the designator can be reassigned to the original organization if it resumes operations.

(2) After the three year period, the designator can be assigned to another organization provided there is no record of significance associated with that element in any of the databases maintained by AVN-120. "Record of significance" refers to any action or record covered under the Freedom of Information Act. If a designator element has an associated record of significance, AVN-120 will not reassign the designator element for at least 10 years.

(3) A change of name in an air operator results in a certificate number change. Although the designator would remain the same the operator would receive the next available numeric element in the sequence log. This does not apply to external load and agricultural operators.

NOTE: A change of ownership for an operator or air agency results in a completely new certificate number.

C. *Numeric/Alpha Suffix Element Reassignment.* A specific numeric element can be reassigned provided a different alpha suffix element is used. For example, 999 can be used with an "A" alpha suffix and with a "B" alpha suffix.

D. *Repair/Satellite Station Unique Certification Number Elements*

(1) Unlike other air operators and air agencies, repair stations may be assigned a three-character alpha-numeric designator instead of just a three-letter designator element. For example, the unique designator element for a repair station could be RAA (three-letter designator) or RA9 (three-character alpha-numeric designator). When a numeric element is included, it means that the designator was machine assigned by AVN-120.

(2) The three-letter/character alpha-numeric designator assigned to satellite stations will be the same as the designator used for the parent station. The only element that will differ is the "type" element. When the repair station has only one satellite station, the type element will be a "D". When a repair station has more than one satellite, the first satellite will use a "D" with all succeeding stations using successive numbering starting with "2".

Number: RWI-R-001-B

Elements: RWI - Rotorworks International
R - Repair Station
001 - Certificated repair station
B - AVN-121 assigned air agency suffix

Number: RWI-R-00D-B

Elements: RWI - Rotorworks International
R - Repair Station
00D - First satellite repair station
B - AVN-121 assigned air agency suffix

Number: RWI-R-002-B

Elements: RWI - Rotorworks International
R - Repair Station
002 - Second satellite repair station
B - AVN-121 assigned air agency suffix

(3) Occasionally the same parent company will own several related repair stations. Since these are separate related facilities and not satellites, these repair stations will all use the same three letter designator. The difference in certificate numbers will be in the type element. Where the satellite station uses a "D" for the first satellite station, related stations

start off with a "2". In addition, a remark will be added by AVN-120 in the comment section that this is not a satellite station.

Number: RWI-R-001-B

Elements: RWI - Rotorworks International
R - Repair Station
001 - Certificated repair station
B - AVN-121 assigned air agency suffix

Number: RWI-R-00D-B

Elements: RWI - Engineworks International
R - Repair Station
002 - First related repair station
B - AVN-121 assigned air agency suffix

Number: RWI-R-002-B

Elements: RWI - Frameworks International
R - Repair Station
003 - Second related repair station
B - AVN-121 assigned air agency suffix

9. TERMINATION OF THE CERTIFICATION PROCESS. If an applicant terminates the certification process prior to certificate issuance, the district office must inform AVN-121. The same holds true for when the FAA terminates the process. Disposition of the designators will be in accordance with paragraph 7B, above.

FIGURE 9-1

AIR OPERATOR/AGENCY TYPE ELEMENTS

TYPE OF CERTIFICATE	TYPE ELEMENT	FAR PART
AIR OPERATORS		
Air Carrier Certificate	A	121/135
Operating Certificate (Business/private carriage)	B	125
Operating Certificate (commercial)	C	121/135
Foreign Operator (Operations specifications only)	F	129
Agricultural Aircraft Operator	G	137
Rotorcraft External-Load Operator	L	133
FAR Part 125 Full Deviation Holder (Certificate number not issued)	M	91
AIR AGENCIES		
Domestic Repair Station	R	145
Domestic Satellite Repair Station	D	145
Foreign Repair Station	Y	145
Foreign Satellite Repair Station	Z	145
Pilot School	S	141
Provisional Pilot School	V	141
Aviation Maintenance Technician School	T	147
Parachute Loft	P	149

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CHAPTER 22 CERTIFICATE AIRFRAME AND/OR POWERPLANT MECHANIC/ADDED RATING

Section 1. Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3501/3508

B. *Avionics*: 5501/5508

3. OBJECTIVE. This chapter provides guidance and describes procedures for certificating applicants for mechanic certificates and ratings.

5. GENERAL. FAR Part 65 provides for the issuance of a mechanic certificate with airframe and/or powerplant rating(s).

7. ELIGIBILITY REQUIREMENTS. Applicants for a mechanic certificate must meet the requirements of FAR Part 65, Subparts A and D. For the certification of foreign applicants physically located outside the United States, as per FAR § 65.3, see Vol. II, Ch. 23.

A. Applicants must be at least 18 years of age. An applicant under 18 may take the tests, but no mechanic certificate will be issued until the applicant's eighteenth birthday.

B. Applicants must be able to read, write, speak, and understand the English language.

> **NOTE: FAR § 65.71(a)(2) states that an applicant who does not meet this requirement and who is employed outside the U.S. by a U.S. air carrier will have the certificate endorsed "Valid only outside the United States." See Vol. II, Ch. 23.**

C. Applicants must have passed all the required tests within the previous 24 months.

9. EXPERIENCE REQUIREMENTS. FAR § 65.77 requires the applicant to have practical experience in maintaining airframes and/or power plants. At least 18 months of practical experience are required for one rating. For a certificate with both ratings, the requirement is for at least 30 months experience concurrently performing the duties appropriate to both ratings.

A. The practical experience should provide the applicant with basic knowledge of and skills with the procedures, practices, materials, tools, machine tools, and equipment used in aircraft construction, alteration, maintenance, and inspection.

B. Experience gained from the military, work as an airframe or powerplant mechanic helper, or work on an experimental amateur-built aircraft should be evaluated on its own merits to determine whether it fulfills the experience requirements. (See Para. 11, Written Test Requirements.)

C. Applicants should not be expected to have become highly proficient in overhauls, major repairs, or major alterations in the minimum 18 months' experience.

D. Powerplant applicants without propeller experience should be aware that powerplant mechanic tests include questions and projects on propellers that must be successfully completed regardless of the applicant's experience.

E. In evaluating part-time practical aviation mechanic experience, an equivalent of 18 months (or 30 months) based on a standard 40-hour work week is acceptable. The months need not be consecutive. A standard work week has 8 hours per day for 5 days per week, thus totalling 40 hours per week and approximately 160 hours per month.

F. For foreign applicants otherwise eligible to take the examinations, the following are examples of the types of documents that would be acceptable to establish the required record of time and experience:

- A detailed statement from a foreign airworthiness authority of the country in which the experience was gained
- A detailed statement from an advisor of the International Civil Aviation Organization that will validate the applicant's experience

11. WRITTEN TESTS PREREQUISITES

A. A graduate of an FAA-approved Aviation Maintenance Technician School may present a certificate of graduation or completion to demonstrate training appropriate to the rating(s) sought. There is no expiration period for this eligibility.

B. Applicants who have not graduated from an FAA-approved Aviation Maintenance Technician School must present documents from an employer, co-worker, or other sources satisfactory to the Administrator to establish the required record of time and experience.

(1) Applicants should document a proportionate amount of experience directly applicable to the certificate and ratings sought.

(2) The FAA inspector should verify all statements made by the applicant to ensure eligibility.

(3) There is no expiration for this eligibility.

C. Applicants who have not graduated from an FAA-approved Aviation Maintenance Technician School and are applying based on military experience must prove their military aviation experience meets the requirements of FAR § 65.77.

(1) To help speed the review process, the applicant should supply the following documentation to the FAA:

(a) A positive form of identification, such driver's license, passport, or military i.d.

(b) A properly completed Form DD-214, which lists the total time in service and the Military Occupational Specialty (MOS) codes the applicant was assigned. For current MOS codes, see Figure 22-1.

(c) A letter from the applicant's executive officer, maintenance officer, or classification officer that certifies the applicant's length of military service, the amount of time the applicant worked in each MOS, the make and model of aircraft and/or engine on which the applicant acquired the practical experience, and where the experience was obtained.

(d) Training records showing the type of aviation schools the applicant attended and/or a record of on-the-job training. Active duty Air Force, selective guard and reserve are eligible for a transcript.

(2) Time spent in training or in an MOS for supervision/inspection should not be counted toward the 18 or 30 months of practical experience required in FAR § 65.77. Only actual hands-on experience is acceptable.

(3) Should an applicant be unable to retrieve the appropriate military records through a reasonable effort, and the only documentation available is the DD-214, the inspector may establish the applicant's military practical experience through an oral interview. The inspector should ask enough thorough and reasonable questions to determine the applicant's actual work experience in the applicable specialty.

(4) The military experience should be directly applicable to the certificate and ratings sought.

(5) There is no expiration for this eligibility.

13. ADMINISTRATION OF WRITTEN TESTS

A. When the inspector is satisfied that the applicant is eligible, arrangements should be made for administering the written tests. If the applicant is qualified, the inspector must issue FAA Form 8060-7, Airman's Authorization for Written Test, according to the requirements of Order 8610.10. Inspectors may issue up to three authorization forms, as needed. Inspectors who receive an FAA Form 8060-7 issued by another inspector may contact the issuing inspector to confirm that the applicant is indeed eligible.

B. There are three separate written tests.

(1) The Aviation Mechanic General (AMG) test has one section and covers subjects that apply equally to the airframe and powerplant ratings. This test must be completed with either of the other two tests on initial testing for a certificate.

(2) The Aviation Mechanic Airframe (AMA) test includes the following sections:

- Airframe Structures
- Airframe Systems and Components

(3) The Aviation Mechanic Powerplant (AMP) test includes the following sections:

- Powerplant Theory and Maintenance
- Powerplant Systems and Components

C. Written tests must be conducted according to the provisions of Order 8080.1, Conduct of Airman Written Tests, as amended.

D. Written test grades are reported to each applicant on AC Form 8080-2, Airman Written Test Report. The report indicates a numerical grade and an expiration date for each section passed. All sections of the written test must be passed within a 24-month period.

E. An applicant for a retest must first present a valid AC Form 8080-2. If less than 30 days have passed since the last test, the applicant must either present a letter from an appropriately certificated person indicating additional instruction received in each subject previously failed or have the bottom portion of AC Form 8080-2 properly filled out and signed. The retest must cover all subject areas in the failed section.

15. ORAL AND PRACTICAL SKILL TEST PREREQUISITES. Applicants for a Mechanic Certificate and/or added rating(s) must meet the applicable knowledge and skill test requirements of FAR § 65.79.

A. Applicants for the oral and practical tests must present a valid AC Form 8080-2 to show proof of successful completion of all sections of the written test. FAR §§ 65.71 (a)(3) and (b) require that all of the prescribed tests, which include the written test and the oral and practical skill tests, be passed within a period of 24 months.

(1) Graduates of an approved school shall complete duplicate copies of FAA Form 8610-2 when applying for oral and practical tests.

(2) Individuals applying based on experience shall present the original FAA Form 8610-2, previously completed at the district office and bearing the FAA inspector's endorsement.

B. Certificated Aviation Maintenance Technician School (AMTS) students may be authorized to take the oral and practical tests before they have met the experience and eligibility requirements and before they have passed the written tests.

(1) Aviation Maintenance Technician Schools must show that the student is in the final phase of training, has made satisfactory progress, and is prepared for the test. The proper school official should complete Items IIE (1) and (2) of FAA Form 8610-2 before the oral and practical tests are administered. The district office will fill out IIF (1) through (4), ensuring that the expiration date matches the graduation date as shown in II (4).

(2) In completing FAA Form 8610-2, the student should show the school's name and location, school certificate number, the student's curriculum, and the expected graduation date.

17. ORAL AND PRACTICAL SKILL TEST ADMINISTRATION

A. Order 8610.4, Mechanic Examiners Handbook, provides standardized procedures for conducting and processing mechanic oral and practical tests. This handbook must be used by inspectors and examiners conducting the tests to ensure a satisfactory standard of competency by applicants for mechanic certificates and ratings.

B. The only acceptable evidence of having passed a required oral or practical test is FAA Form 8610-2. In the "Results of Oral and Practical Tests" portion on the reverse side, the form must indicate either that the student has passed, with an expiration date, or that the student has failed, listing the questions and/or projects failed.

C. An applicant for a retest must first present a valid AC Form 8080-2 or FAA Form 8610-2. If less than 30 days have passed since the last test, the applicant should present a letter from an appropriate source indicating additional instruction received in each subject previously failed. The retest must cover all subject areas in the failed section.

D. Applicants for additional rating(s) who have passed the General section of the test need not retake the General section.

19. CHANGE OF ADDRESS/NAME/SEX

A. *Change of Address.* The holder of an airman certificate issued under FAR Part 65 must notify the FAA in writing within 30 days after any change in permanent mailing address. AC Form 8060-55, Change of Address, can be used.

B. *Change of Name or Sex.* The application for change of name or sex on a certificate may be made by a letter signed by the certificate holder.

(1) The application should be accompanied by appropriate documents verifying the change. Each document should conform to the laws of the state of residence.

(2) The applicant's current certificate should accompany the application. The applicant will be issued a temporary certificate to use while awaiting the changes.

21. FALSIFICATION, FRAUDULENT REPRODUCTION, OR ALTERATION OF DOCUMENTS. Persons who falsify, fraudulently reproduce, or alter certificates or other documents required to support the issuance of a certificate are subject to suspension or revocation of any airman certificate held.

23. INELIGIBLE APPLICANTS

A. An airman whose mechanic certificate is suspended or revoked may not apply for another rating during the period of suspension/revocation. The inspector should review the suspension/revocation order, which will specify any unique terms regarding its duration.

B. FAR § 65.12 prohibits issuance of a certificate to any person convicted of a drug-related offense within the previous 12 months.

NOTE: A conviction that is under legal appeal is not considered a final conviction.

25. COMPETENCY EXAMINATIONS/REEXAMINATIONS. Section 609 of the FA Act of 1958 provides for reexamination.

A. An airman demonstrating questionable competency while exercising the privileges of the certificate and ratings may be reexamined.

(1) Inspectors should consider airman competency as a factor in the following:

- Complaint investigations
- Surveillance
- Unairworthy aircraft notice issuance
- Incident investigations
- Accident investigations
- Enforcement investigations
- Hearings, both formal and informal

(2) Questions of airman competency may arise from any source.

B. Based on the results of a reexamination, the FAA may approve, amend, suspend, or revoke the airman's certificate.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 65

B. *Coordination.* None.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Order 8080.1, Conduct of Airman Written Tests, as amended
- Order 8300.10, Vol. II, Ch. 23, Evaluate Foreign Applicants for Mechanic Certificates/-Ratings
- Order 8610.4, Aviation Mechanic Examiner Handbook, as amended
- Order 8610.10, Revised FAA Form 8610-2 (2-85) Airman Certificate and/or Rating Application

B. *Forms*

- FAA Form 8060-7, Airman's Authorization for Written Test
- FAA Form 8610-2, Airman Certificate and/or Rating Application
- AC Form 8060-4, Temporary Airman Certificate
- AC Form 8060-55, Change of Address
- AC Form 8060-56, Application for Replacement of Lost or Destroyed Airman Certificate(s)
- AC Form 8080-2, Airman Written Test Report

C. *Job Aids*

- Figure 22-1, Military Occupational Specialty Codes

5. PROCEDURES

A. *Review Application*

(1) If the applicant has previously held or currently holds an airman's certificate, check the Enforcement Information System (EIS) file. Obtain a copy of any suspension/revocation order for review. If the applicant is ineligible for a certificate/rating, return the application and take enforcement action under FAR § 65.20.

(2) If the applicant is eligible, proceed with the certification.

B. *Ensure the Applicant Meets Requirements for Certificate/Rating*

(1) Ensure the applicant has met the experience requirements.

(2) Determine that the applicant can read, write, speak, and understand the English language.

(3) Verify that the applicant is at least 18 years old. If the applicant is under 18, explain that no certificate will be issued until the applicant's eighteenth birthday.

C. *Establish Eligibility for Written Test*

(1) Require applicants who are graduates of an Aviation Maintenance Technician School to present an appropriate graduation certificate or certificate of completion.

(2) If the applicant is not a graduate of an Aviation Maintenance Technician School, ensure appropriate documentation of time and work experience is presented.

D. *Authorize Applicant for Written Test.* Arrange for the administration of the written test as needed, for applicants who have met eligibility requirements. If the written test is to be taken at another time or place, issue up to three FAA Forms 8060-7, Airman's Authorization for Written Test, as needed, in addition to FAA Form 8610-2, Airman Certificate and/or Rating Application.

E. *Ensure the Application for Oral and Practical Tests Includes Proof of Successful Completion of Applicable Written Tests.* Review FAA Form 8080-2, Airman Written Test Report, to ensure that all appropriate sections of the written test have been passed within a 24-month period.

F. *Ensure Oral and Practical Tests Are Administered and Passed.* If necessary, administer these tests to the applicant according to Order 8610.4, Aviation Mechanic Examiner Handbook, as amended.

G. *Review Oral and Practical Test Results.* Verify that all applicable sections have been successfully completed within a 24-month period.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. *Issue a Certificate/Added Rating*

(1) *Temporary Certificate.* After the applicant has successfully met all requirements for the certificate/rating, issue FAA Form 8060-4, Temporary Airman Certificate. This form must be either typewritten or filled out in ink.

(a) *Original issuance.* If a social security number is not provided by the applicant, enter the word "pending" in Block III. If a social security number is provided, enter the number without dashes or spaces in Block III as the certificate number.

(b) *Reissuance.* The previously assigned certificate number will continue to be shown in Block III. If a social security number is provided, however, enter the number without dashes or spaces immediately above the applicant's date of birth. A certificate may be reissued when an airman requests that the certificate number correspond to the social security number.

(2) Fill out FAA Form 8610-2.

(a) When the applicant passes a section, check the "Pass" block and indicate the expiration date. Complete the "FAA Inspector Report" portion of FAA Form 8610-2. Sign the form with the office identifier and date.

NOTE: The inspector's signature in the FAA Inspector's Report Block on the back of the application indicates only that the form has been reviewed for completeness. This signature is not an endorsement of the applicant's eligibility.

(b) Give the applicant the duplicate copy of FAA Form 8610-2 with instructions to hold until the permanent certificate is issued.

(3) Make and submit to AVN-460 a file with the following:

- A typewritten original, FAA Form 8060-4, signed by the issuing inspector
- The original copy of FAA Form 8610-2. For retests, also send a duplicate copy.

NOTE: AVN-460 will only accept originals of FAA 8610-2.

- AC Form 8080-2, Airman Written Test Report
- A document certifying additional instruction, if the test was retaken within 30 days
- AC Form 8060-1, Mechanic Certificate, when adding a rating

(4) Certification files should be sent to AVN-460 as soon as possible to permit the necessary review and processing to take place before the expiration of the temporary certificate.

C. *Deny a Certificate/Added Rating*

(1) When the applicant fails any required section of the oral or practical test or does not complete the test, accomplish the following:

- Complete the "FAA Inspector Report" portion of FAA Form 8610-2. Check the "Fail" block.
- Return the duplicate copy to the applicant as a record of the sections passed or failed
- Return other documents to the applicant, as appropriate

(2) *Retest After Failure.* Conduct written retests in accordance with the procedures in Order 8080.1, as amended.

(a) The oral and practical retests must cover all the subject areas in the failed section, as indicated on the application.

(b) If the applicant fails again, complete FAA Form 8610-2 only for the sections included in the retest. An AC Form 8080-2 presented by an unsuccessful applicant for the oral/practical retest must be returned to the applicant with a new duplicate of FAA Form 8610-2.

(c) An applicant's final certification file must include an original FAA Form 8610-2 for the original test and each retest.

D. Investigate all indications or reports of falsification, fraudulent reproduction, or alteration of airman certification documents and applications.

9. FUTURE ACTIVITIES

A. *Emergency Replacement Certificates.* In an emergency, a Temporary Airman Certificate may be issued to replace a lost or destroyed certificate.

(1) The following conditions must be met before an airworthiness inspector can issue an emergency replacement certificate:

(a) The mechanic must show that an immediate replacement of the lost or destroyed certificate is necessary to start or continue employment

(b) The mechanic must show that it is not possible or feasible to obtain a telegram according to FAR § 65.16(d)

(c) The mechanic either must be personally known to the inspector or must present, in person, acceptable evidence of identity

(d) The inspector must contact AVN-460 to confirm the validity and ratings of the lost or destroyed certificate.

(2) The temporary certificate issued should be clearly marked "EMERGENCY FIELD ISSUANCE" and be limited to the reasonable time necessary for the mechanic to obtain a duplicate certificate from AVN-460. In no case shall the temporary certificate be issued for more than 60 days.

B. Conduct routine surveillance.

FIGURE 22-1

MILITARY OCCUPATIONAL SPECIALTY CODES

Following are both the updated and the older MOS codes for the U.S. Army, Air Force, Navy, Marine Corps, and Coast Guard. The new codes are used for active duty time after January, 1990. The older codes are still valid for persons wishing to credit their military aviation maintenance experience toward meeting the requirements of the FAA airframe and powerplant mechanic certificate.

US ARMY CODES

Updated MOS Codes	Title	Creditable Experience
67G 10/20/30	Utility Aircraft Repairer	Airframe
67H 10/20/30	Observation Aircraft Repairer	Airframe
67N 10/20/30	Utility Helicopter Repairer	Airframe
67T 10/20/30	Tact/Transport Helicopter Repairer	Airframe
67R 10/20/30	AH-64 Helicopter Repairer	Airframe
67S 10/20/30	Scout Helicopter Repairer	Airframe
67Y 10/20/30	AH-1 Helicopter Repairer	Airframe
67V 10/20/30	Observe/Scout Helicopter Repairer	Airframe
67X 10/20/30	Heavy Lift Helicopter Repairer	Airframe
67U 10/20/30	Medium Helicopter Repairer	Airframe
68G 10/20/30	Aircraft Structural Repairer	Airframe
68B 10/20/30	Aircraft Powerplant Repairer	Powerplant

Old MOS Codes	Title	Creditable Experience
67G	Airplane Repairer	Airframe
67N	Helicopter Repairer	Airframe
67U	Helicopter Repairer	Airframe
67V	Helicopter Repairer	Airframe
67W	Helicopter Repairer	Airframe
67X	Helicopter Repairer	Airframe
67Y	Helicopter Repairer	Airframe
67Z	Aircraft Maintenance Sr. Sergeant	Airframe & Powerplant
68B	Aircraft Powerplant Repairer	Powerplant
68G	Aircraft Structural Repairer	Airframe
67B20	0-1/U6 Airplane Repairman	Airframe
67C20	U-1 Airplane Repairman	Airframe
67D20	Single Engine Airplane Repairman	Airframe

67E40	Single Engine Airplane Maint. Chief	Airframe
67E50	Single Engine Airplane Maint. Chief	Airframe
67J20	Multi Engine Med. Transp. Airplane Mech.	Airframe
67K20	Multi Engine Airplane Repairman	Airframe
67L40	Multi Engine Airplane Mechanic Chief	Airframe
67L50	Multi Engine Airplane Mechanic Chief	Airframe
67P20	CH-34 Helicopter Repairman	Airframe
67Q20	Single Eng., Single Rotor Hel. Repairman	Airframe
67R40	Single Eng., Single Rotor Hel. Maint. Ch.	Airframe
67R50	Single Eng., Single Rotor Hel. Maint. 1SG	Airframe
67S20	CH-21 Helicopter Mechanic	Airframe
67S30	CH-21 Helicopter Repairman	Airframe
67S40	CH-21 Helicopter Maint. Supervisor	Airframe
67S50	CH-21 Helicopter Maint. 1SG	Airframe
67M20	H-13/H-23 Helicopter Repairman	Airframe
67T20	CH-37 Helicopter Mechanic	Airframe
67T30	CH-37 Helicopter Repairman	Airframe
67T40	CH-37 Helicopter Maint. Supervisor	Airframe
67T50	CH-37 Helicopter Maint. 1SG	Airframe
68C20	Reciprocating Engine Repairman	Powerplant
68B2Z1	Reciprocating Engine Repairman	Powerplant

US AIR FORCE CODES

Updated MOS Codes	Title	Creditable Experience
43150/43130/43110	Helicopter Mechanic	Airframe
42755/42735/42715	Airframe Repair Specialists	Airframe
43153/43133/43113	Airlift Aircraft Maint. Spec.	Airframe
43151/43131/43111	Tactical Aircraft Maint. Spec.	Airframe
43170	Helicopter Technician	Airframe
42652/42632/42612	Jet Engine Mechanic	Powerplant
42653/42633/42613	Turboprop Propulsion Mech.	Powerplant
42672	Jet Engine Technician	Powerplant
42673	Turboprop Propulsion Tech.	Powerplant
45274	TAC Aircraft Maint. Tech.	Airframe-Powerplant
45254/45234/45214	TAC Aircraft Maint. Spec.	Airframe
45490	Aerospace Prop. Superintendent	Powerplant
45470	Aerospace Propulsion Tech.	Powerplant
45450/45430/45410	Aerospace Propulsion Spec.	Powerplant
45779	Stra/Airlift Maint. Super.	Airframe
45770	Stra Aircraft Maint. Tech.	Airframe

45750/45730/45710	Stra Aircraft Maint. Spec.	Airframe
45771	Helicopter Maint. Tech.	Airframe
45751/45731/45711	Helicopter Maint. Spec.	Airframe
45772	Airlift Aircraft Maint. Tech.	Airframe
45752/45732/45712	Airlift Aircraft Maint. Spec.	Airframe

NOTE: Creditable experience for the following Air Force MOS codes have been changed to airframe only based on a review of the Air Force: 43130; 43131; 43150; 43151; and, 43170.

Old MOS Codes	Title	Creditable Experience
42671	Reciprocating Engine Technician	Powerplant
42651	Reciprocating Engine Mechanic	Powerplant
42631	Reciprocating Engine Mechanic	Powerplant
42692	Aircraft Propulsion Superintendent	Powerplant
42672	Jet Engine Technician	Powerplant
42652	Jet Engine Mechanic	Powerplant
42632	Jet Engine Mechanic	Powerplant
42673	Turboprop Propulsion Technician	Powerplant
42653	Turboprop Propulsion Mechanic	Powerplant
42633	Turboprop Propulsion Mechanic	Powerplant
42799	Fabrication Superintendent	Airframe
42775	Airframe Repair Technician	Airframe
42755	Airframe Repair Specialist	Airframe
42735	Airframe Repair Specialist	Airframe
43170	Helicopter Technician	Airframe
43150	Helicopter Mechanic	Airframe
43130	Helicopter Mechanic	Airframe
43191	Aircraft Maintenance Superintendent	Airframe & Powerplant
43171	Aircraft Maintenance Technician	Airframe & Powerplant
43151	Aircraft Maintenance Specialist	Airframe
43131	Aircraft Maintenance Specialist	Airframe
43172	Airlift/Bombardment Aircraft Maintenance Technician	Airframe & Powerplant
43152	Airlift/Bombardment Aircraft Maintenance Technician	Airframe & Powerplant
43132	Airlift/Bombardment Aircraft Maintenance Technician	Airframe & Powerplant

US COAST GUARD CODES

Updated MOS Codes	Title	Creditable Experience
AD-02	Turboshaft Engines	Powerplant
AM-01	Structures	Airframe
AD	Aviation Machinist Mate	Powerplant
AM	Aviation Structural Mechanic	Airframe

US NAVY CODES

Updated MOS Codes	Title	Creditable Experience
AD-6402	Reciprocating Engine Technician	Powerplant
AD-6409	J-57 Turbojet Engine Mechanic	Powerplant
AD-6410	F-110 Turbofan Jet Engine Technician	Powerplant
AD-6414	TF-41 Turbofan Jet Engine Technician	Powerplant
AD-6415	TF-30 Turbofan Jet Engine Mechanic	Powerplant
AD-6416	J-52 Turbojet Engine Mechanic	Powerplant
AD-6417	T-400 Turboshaft Jet Engine Mechanic	Powerplant
AD-6418	T-56 Turboprop Engine Mechanic	Powerplant
AD-6419	T-58 Turboshaft Jet Engine Mechanic	Powerplant
AD-6420	T-404 Turbofan Jet Engine Mechanic	Powerplant
AD-6421	TF-34 Turbofan Jet Engine Mechanic	Powerplant
AD-6423	T-56-425/426 Turboprop Engine and Propeller Mechanic	Powerplant
AD-6424	T-64 Turboshaft Jet Engine Mechanic	Powerplant
AD-6426	T-700 Turboshaft Jet Engine Mechanic	Powerplant
AD-6427	J-85 Turboshaft Engine Mechanic	Powerplant
AM-7232	Structural Repair Technician	Airframe

Old MOS Codes	Title	Creditable Experience
AD	Aviation Machinist Mate	Powerplant
ADJ	Aviation Machinist Mate	Powerplant
ADR	Aviation Machinist Mate	Powerplant
AM	Aviation Structural Mechanic	Airframe
AME	Aviation Structural Mechanic	Airframe
AMH	Aviation Structural Mechanic	Airframe
AMS	Aviation Structural Mechanic	Airframe

US MARINE CORPS CODES

Updated MOS Codes	Title	Creditable Experience
6092	Aircraft Structures Mechanic A-4/TA-4/OA-4	Airframe
6093	Aircraft Structures Mechanic A-6/EA-6	Airframe
6094	Aircraft Structures Mechanic F-4/RF-4	Airframe
6095	Aircraft Structures Mechanic AV-8/TAV-8	Airframe
6096	Aircraft Structures Mechanic KC-130	Airframe
6097	Aircraft Structures Mechanic F/A-18	Airframe
6098	Aircraft Structures Mechanic OV-10	Airframe
6142	Helicopter Structures Mechanic CH-46	Airframe
6143	Helicopter Structures Mechanic CH-53	Airframe
6144	Helicopter Structures Mechanic U/AH-1	Airframe
6022	Aircraft Powerplant Mechanic J-52	Powerplant
6023	Aircraft Powerplant Mechanic T-76	Powerplant
6024	Aircraft Powerplant Mechanic J-79	Powerplant
6025	Aircraft Powerplant Mechanic Rolls Royce Pegasus	Powerplant
6026	Aircraft Powerplant Mechanic T-56	Powerplant
6027	Aircraft Powerplant Mechanic F-404	Powerplant
6122	Helicopter Powerplant Mechanic T-58	Powerplant
6123	Helicopter Powerplant Mechanic T-64	Powerplant
6125	Helicopter Powerplant Mechanic T-400	Powerplant

Old MOS Codes	Title	Creditable Experience
6012	Aircraft Mechanic	Airframe
6013	Aircraft Mechanic	Airframe
6014	Aircraft Mechanic	Airframe
6015	Aircraft Mechanic	Airframe
6016	Aircraft Mechanic	Airframe
6017	Aircraft Mechanic	Airframe
6018	Aircraft Mechanic	Airframe
6019	Aircraft Maintenance Chief	Airframe & Powerplant
6022	Aircraft Powerplant Mechanic	Powerplant
6023	Aircraft Powerplant Mechanic	Powerplant
6024	Aircraft Powerplant Mechanic	Powerplant
6025	Aircraft Powerplant Mechanic	Powerplant
6026	Aircraft Powerplant Mechanic	Powerplant
6027	Aircraft Powerplant Mechanic	Powerplant
6028	Aircraft Powerplant Mechanic	Powerplant
6029	Aircraft Powerplant Mechanic	Powerplant

6042	Aircraft Structures Mechanic	Airframe
6059	Aircraft Airframe Maintenance Chief	Airframe
6092	Aircraft Structures Mechanic	Airframe
6093	Aircraft Structures Mechanic	Airframe
6094	Aircraft Structures Mechanic	Airframe
6095	Aircraft Structures Mechanic	Airframe
6096	Aircraft Structures Mechanic	Airframe
6097	Aircraft Structures Mechanic	Airframe
6098	Aircraft Structures Mechanic	Airframe
6112	Helicopter Mechanic	Airframe
6113	Helicopter Mechanic	Airframe
6114	Helicopter Mechanic	Airframe
6119	Helicopter Maintenance Chief	Airframe & Powerplant
6122	Helicopter Powerplant Mechanic	Powerplant
6123	Helicopter Powerplant Mechanic	Powerplant
6124	Helicopter Powerplant Mechanic	Powerplant
6125	Helicopter Powerplant Mechanic	Powerplant
6142	Helicopter Structures Mechanic	Airframe
6143	Helicopter Structures Mechanic	Airframe
6144	Helicopter Structures Mechanic	Airframe

CHAPTER 26 EVALUATE INSPECTION AUTHORIZATION

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3512

B. *Avionics:* 5512

3. OBJECTIVE. This chapter provides guidance for issuance of an inspection authorization.

5. GENERAL. Advisory Circular 65-19, Inspection Authorization Study Guide, as amended, serves as a reference and study guide for persons interested in obtaining an inspection authorization.

A. There is no limit on the number of inspection authorizations that may be issued by a given field office. No qualified applicant should be refused the opportunity to take the test.

B. Field personnel should urge the holders of an inspection authorization to obtain and subscribe to changes for advisory circulars and other pertinent publications. Inspectors should offer guidance for obtaining the required data, as requested. However, the responsibility for obtaining this material rests with the holder of the inspection authorization.

7. ELIGIBILITY. None of the requirements of FAR § 65.91 shall be waived by field personnel.

A. The applicant must hold a mechanic certificate with airframe and powerplant ratings that is current and has been in effect for at least three years. The applicant must have been actively engaged in maintain-ing civil aircraft for at least the two year period before the date of application.

B. There must be a fixed base of operation at which the applicant can be located in person or by telephone. This base need not be the place where the applicant will exercise the inspection authority.

C. The applicant must have available the equipment, facilities, and inspection data necessary to conduct proper inspection of airframes, powerplants, propellers, or any related part or appliance. This data must be kept current.

D. The applicant must pass a written test on the ability to inspect according to safety standards for approval to return to service an aircraft, related part, or appliance after major repairs, major alterations, annual, and progressive inspections performed under FAR Part 43. There is no practical test required for an inspection authorization.

9. WRITTEN TEST. The person conducting the required test must be thoroughly familiar with current airworthiness regulations, aircraft specifications, type certificate data sheets, airworthiness directives, and inspection requirements.

A. The written test establishes the applicant's ability to read, understand, interpret, and apply the regulations, policies, and procedures set forth in FAA publications. It also provides the opportunity for personal contact with the applicant to discuss the various requirements and procedures associated with exercising the privileges of the inspection authorization.

(1) Applicants should understand the test procedures, including the enforcement of time limitations.

(2) Applicants must take the test in sequence.

(3) Applicants should have available appropriate aircraft specifications, type certificate data sheets, Federal Aviation Regulations, and other material to answer Parts II and III of the test. Prior to the examination, applicants should coordinate with the inspector conducting the examination to determine what materials are appropriate.

(4) Applicants should understand that failure of any part will require a wait of 90 days before retesting is allowed.

B. The test should be scheduled early in the day to allow the applicant time to complete all parts within the working day. However, the applicant may be given the test at one or more sittings, one part at a time, starting with Part I.

(1) The time at which the applicant must surrender the paper should be entered on the test cover or in the space provided.

(2) The examining official must select an aircraft on which the applicant's answers will be based. The aircraft should be a model and serial number eligible for standard airworthiness certification.

(a) While the use of aircraft certificated under FAR Part 25 or CAR 4b is permissible, it is suggested that the aircraft selected be of a type certificated under FAR Part 23 or CAR 3.

(b) To preserve the effectiveness of the test, the examiner should give each applicant a different model aircraft.

C. The minimum passing grade on any part of the written test is 70 percent.

(1) The person conducting the test must use the specific scoring key and guide to grading that comes with the particular inspection authorization written test.

(a) The multiple choice questions in Part I must be graded using the scoring key provided.

(b) The person conducting the test must determine the correct answers for Parts II and III, as many answers will change as specifications are revised and new Airworthiness Directives are issued. All grading of these parts must be indicated by a correct or incorrect answer only.

(c) Variations in serially numbered aircraft of the same make and model may require different answers.

(2) It is not necessary for applicants to quote regulations verbatim or to use the exact words shown in the grading guide.

(3) When an applicant passes all parts of the inspection authorization written test, airworthiness inspectors should discuss any questions the applicant answered incorrectly prior to issuing the authorization. This will ensure that the applicant clearly understands the inspection authorization privileges, limitations, responsibilities, and functions in the aviation community.

11. DURATION OF INSPECTION AUTHORIZATION. An inspection authorization expires March 31 of each year and ceases to be effective whenever either of the following occur:

- The authorization is surrendered, suspended, or revoked. When this occurs, the inspector shall request the holder to return the authorization, FAA Form 8310-5.

- A holder fails to meet the renewal requirements of FAR § 65.91(c)(1) through (5).

13. PRIVILEGES OF AN INSPECTION AUTHORIZATION

A. When exercising the privileges of an inspection authorization, the holder may:

- Inspect and approve for return to service major repairs and major alterations if the work was done according to technical data approved by the Administrator

- Perform an annual inspection

- Perform or supervise a progressive inspection

B. An inspection authorization holder shall not approve for return to service major repairs, major alterations, or inspection on an aircraft maintained according to a continuous airworthiness program under FAR Parts 121/135 and 127.

C. When operating away from the district office having geographic responsibility, the inspection authorization holder should notivy the district office in the area in which the work will be perfromed, prior to exercising the authorization.

D. An inspection authorization holder who changes the fixed base of operation may not exercise the privileges of the authorization prior to notifying the district office or international field office for the area in which the new base is located. This notification must be in writing.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of FAR Parts 39, 43, and 65

B. *Coordination.* None.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Advisory Circular 65-19, Inspection Authorization Study Guide, as amended
- Order 8300.10, Vol. II, Ch. 27, "Renew Inspection Authorization"

B. *Forms*

- FAA Form 8060-5, Notice of Disapproval of Application
- FAA Form 8310-5, Inspection Authorization
- FAA Form 8610-1, Mechanic's Application for Inspection Authorization

C. *Job Aids.* None.

5. PROCEDURES

A. *Review the Application*

(1) If the applicant has previously held or currently holds an airman's certificate, check the Enforcement Information System (EIS) file. Obtain a copy of any suspension/revocation order for review. If the applicant is ineligible for an inspection authorization, return the application.

(2) Ensure documents provide a complete and positive record of meeting the requirements.

B. *Verify That the Applicant Has Met the Requirements for the Authorization as Specified in FAR § 65.91(c)(1) through (4)*

C. *Administer the Test*

(1) Ensure the applicant has the material required to complete the test.

(2) Advise the applicant of the time limitations. Note the time the test started on the cover of the test booklet.

(3) Monitor the applicant's progress.

(4) Grade each section of the test in sequence. Ensure the applicant has successfully completed each part before taking the next part.

(5) Record test results in the booklets. Do not remove or reproduce pages or retain any part of the test booklet in the district office files. Return used booklets to the distribution section, AAC-65C.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. *Issue Inspection Authorization*

(1) When an applicant successfully completes the test, issue an Inspection Authorization, FAA Form 8310-5, as follows:

- Type all information on the face of FAA Form 8310-5
- Enter the mechanic's full name in the space provided
- Make certain that the mechanic certificate number entered on this form is the same as that appearing on the applicant's mechanic certificate, AC Form 8060-1
- Have the applicant sign FAA Form 8310-5 in ink

(2) Forward the original copy of FAA Form 8610-1 to the Airmen Certification Branch, AVN-460. Retain the duplicate copy for the district office files.

C. *Deny Inspection Authorization.* Issue FAA Form 8060-5, Notice of Disapproval of Application, to applicants who fail to make a grade of 70 percent on any part of the test.

(1) Complete an original and one copy indicating the part or parts failed. Type the following on the reverse side of the form and bring it to the attention of the applicant: "If you present your application for a retest to the district office listed below, you will not be required to retake Part(s) (indicate part(s) successfully completed). (Insert district office name and location)."

(2) Give the original to the applicant. Retain the duplicate for the district office file with the application, Form 8610-1. No further report or record of action is required.

9. FUTURE ACTIVITIES. Inform the Inspection Authorization holder of the requirement to report any change of base of operation. Conduct annual inspection authorization renewal and routine surveillance.

[CHAPTER 36 RESERVED]

[CHAPTER 36 RESERVED]

- AC 135-3, Air Taxi Certification, as amended
- AC 135-10, Approved Aircraft Inspection Program, as amended

B. *Forms*

- FAA Form 8400-6, Preapplication Statement of Intent
- FAA Form 8400-8, Operations Specifications
- FAA Form 8430-18, Air Carrier Certificate
- FAA Form 8430-21, Operating Certificate

C. *Job Aids.* None.

5. PROCEDURES

A. *Advise The Applicant of the Process for Certification of an Air Carrier (9 or less) and of Federal Aviation Regulation Requirements.* Provide the following:

- A Preapplication Statement of Intent
- Advisory Circular 135.3, Air Taxi Certification, as amended

B. *Review the Preapplication Statement of Intent For Content, Completeness, and Acceptability*

(1) If the Preapplication Statement of Intent is unacceptable, inform the applicant of the discrepancies in writing. A new Preapplication Statement of Intent will be required to continue the certification process.

(2) If the Preapplication Statement of Intent is acceptable, check the action box and forward a copy to the regional office.

(3) The district office assigned to the project should contact AVN-120 to acquire a precertification number.

C. *Schedule a Precertification Meeting With the Applicant.* Assure that key personnel from the applicant's organization and all certification team members will be in attendance.

D. *Conduct the Precertification Meeting*

(1) Review the Preapplication Statement of Intent with the applicant to ensure that the information is current. If necessary, instruct the applicant to resubmit the Preapplication Statement of Intent.

(2) Ensure the applicant understands the applicable regulations. Advise the applicant to become familiar with the Federal Aviation Regulations and pertinent advisory circulars.

(3) Ensure the applicant and key personnel understand the certification process.

(4) Advise the applicant that the FAA will not issue a certificate until proof of Department of Transportation economic authority or DOT 298 exemption is provided.

NOTE: If at any time during the preapplication phase the applicant formally terminates certification efforts, return the Preapplication Statement of Intent to the applicant and notify the regional office and AVN-120.

E. *Receive the Formal Application and Accompanying Documentation.* These may include the following:

- A manual (as required)
- An initial compliance statement
- Operations specifications
- Schedule for proving flights (as required)
- Training curriculum
- Minimum Equipment List (MEL) (as required)
- Any other documents required by the certification team

F. *Schedule and Conduct the Formal Application Meeting*

(1) The certification team will review the application form, the initial compliance statement, and the schedule for proving flights with the applicant and key personnel from the organization.

(2) Resolve any open questions and obtain missing information.

(3) If the applicant cannot meet the regulatory requirements, the formal application and accompanying documents reject and return them to the applicant. A letter must accompany this package listing the reasons for the rejection.

G. *Review Documents Submitted By the Applicant.* Ensure each document complies with regulations. If deficiencies are found in any of the documents, send the applicant a letter outlining the deficient areas.

NOTE: The team members should remember that it is the responsibility of the applicant to develop manuals and procedures. The team can offer suggestions on how to improve the product but should avoid "writing" the document.

H. *Observe Demonstrations and Conduct Inspections*

(1) Ensure the following are acceptable:

- Station facilities (equipment, procedures, and personnel), if applicable
- Recordkeeping procedures (documentation of training, flight and duty times, flight papers, etc.), as required
- Flight control (dispatch, flight following, or flight locating capabilities)
- Inspection and maintenance program procedures
- Maintenance activities (facilities, personnel, technical information, spare parts, etc.), as required
- Weight and balance control (procedures, accuracy, and document control)
- Aircraft (conformity, maintenance records, etc.)
- Minimum Equipment List
- Aircraft proving tests (ability of applicant to operate independently, safely, and in compliance with the applicable Federal Aviation Regulations), if required
- Any other documents, procedures, facilities, and/or events appropriate for the type of operation to be conducted

(2) Inform the applicant of any deficiencies noted. Advise the applicant that corrective action will be required to continue the certification process.

I. *Prepare the Certificate.* When the applicant has met all certification requirements, fill out the certificate with the following information:

- Certificate holder's name
- Certificate holder's address (post office box not acceptable)
- Certificate number (obtain from AVN-120)
- Effective date
- District office designator
- Signature and title of district office manager

J. *Issue Operations Specifications, as Appropriate.* Operations specifications must be signed by the applicant or authorized member of the organization and the appropriate principle inspector. Give the original certificate and the operations specifications to the certificate holder.

K. *Establish the Certificate Holding District Office (CHDO) File For the Certificate Holder*

(1) Include the following information in the file:

- The Preapplication Statement of Intent
- The completed application form
- Final compliance statement
- Proving test evaluation report (if required)
- A copy of operations specifications
- A copy of the certificate
- A report by each team member, summarizing evaluations and observations from each phase of the certification process

CHAPTER 76 CONDUCT FAR PART 121/135 PROVING/VALIDATION TESTS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3318

B. *Avionics:* 5318

3. OBJECTIVE. This chapter provides guidance for conducting proving tests, as required by FAR §§ 121.163 and 135.145, and for evaluating an operator/applicant's compliance through the use of validation tests per FAR Part 121, Subparts E and F, and FAR § 135.13.

5. GENERAL

A. *Definitions*

(1) *Proving Tests:* Tests conducted by an operator/applicant to demonstrate the ability to operate according to proposed procedures and regulatory requirements for original certification or introduction of equipment new to the operator.

(2) *Provisionally Certificated Aircraft:* Aircraft in the process of receiving a type certificate or an amendment to an existing type certificate.

(3) *Validation Tests:* Tests conducted by an operator/applicant to demonstrate the ability to operate according to procedures and regulatory requirements for specific operational authorizations.

B. *Test Differences.* Proving and validation tests differ with respect to regulatory source and application. Both tests provide a method for evaluating an operator's demonstrated operational ability. Both the testing methods and the results of the tests must be acceptable to the Administrator.

C. *FAA Inspection Team Requirements.* The district office manager shall organize the inspection team and assign a principal inspector as team leader.

(1) The team leader will be responsible for the conduct, coordination, and evaluation of the test plan. In addition, the team leader will be the spokesperson for the Administrator on all matters pertaining to the test.

(2) The inspection team should have the following personnel, as required:

- An Aviation Safety Inspector (operations) type-rated on the equipment
- Aviation Safety Inspectors (maintenance and avionics) trained on the equipment and experienced in either FAR Parts 121 or 135 operations, as applicable

(3) All members should be familiar with the pertinent parts of the operator's manual and program

NOTE: If qualified inspectors are not available within the district office, the district office must request assistance from the region.

7. PROVING TESTS. Proving tests are conducted to ensure that an operator's organization and maintenance program can support a proposed operation effectively and safely. The operator/applicant must demonstrate the ability to conduct line operation functions with a specific aircraft in compliance with regulations and safe operating practices. FAR Parts 121 and 135 require aircraft proving tests when the following occurs:

- Initial certification of an applicant
- An operator submits a proposal to add to its operations specifications an aircraft type that the operator has not operated previously
- An operator submits a proposal to use materially altered aircraft

A. *Proving Test Plan.* The operator/applicant must develop and submit a proving test plan at least 10 days prior

to any in-flight demonstration the operator desires to have credited toward proving test requirements. This includes training or ferry flights. Any deviations to this plan must be coordinated with the Certificate Holding District Office.

B. During the FAA planning stage, the team leader shall assign responsibility for different sections of the proving test report to specific members of the team.

(1) Each team member's responsibility includes project participation until the final report is ready for submission.

(2) Team leader responsibilities include the following:

- Notifying the region of proving test dates, times, and locations. The region shall notify other regions affected by the impending proving tests and any resulting scheduled operations proposed by the operator.
- Assigning appropriate sections of the test plan to maintenance, avionics, and operations inspectors for their review and comment
- Coordinating with the office of aviation security, as necessary, to obtain security inspector assistance for evaluating specific areas such as hazardous materials and passenger screening

NOTE: Figure 76-1 provides guidance to the team leader in the planning and coordination phase.

C. *Personnel Participation.* Regulations limit the participants in the in-flight portion of the proving tests to those required by the operator to conduct the tests and those designated by the Administrator. The number of persons on board in excess of the crew and the FAA proving test team must be kept to a minimum. Personnel in this category will be limited to the following:

- Operator/applicant's supervisory personnel
- Designated FAA representatives from regional and/or Washington headquarters
- Representatives of the aircraft/engine/accessories manufacturer(s)

D. *Provisional Airworthiness Certificates.* In rare situations, an operator/applicant may propose to use a provisionally certificated aircraft during proving tests under FAR Part 121.

(1) The issuance of a Provisional Airworthiness Certificate, per Subpart I of FAR Part 21, is the responsibility of the Manufacturing Inspection District Office.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(2) To obtain FAA approval, the operator must show that no feature, characteristic, or condition of the aircraft would make it unsafe when operated in accordance with FAR §§ 91.317, {91.41}, and 121.207.

NOTE: FAR Part 135 does not permit the use of provisionally certificated aircraft for proving tests.

9. VALIDATION TESTS. Validation tests provide the operator with an opportunity to demonstrate to the Administrator that specific line operations, such as two-engine, extended-range, long-range navigation, and Category II and III operations, can be conducted safely. Validation tests, like proving tests, are operator-oriented but are usually more limited in scope. Validation tests and proving tests may be conducted jointly.

11. THE PROVING AND VALIDATION TEST PROCESS

A. *Phase I.* During Phase I, the team leader must ensure that the operator/applicant is aware of the specific proving or validation test requirements and the requirement for submitting the plan to the Administrator.

(1) Phase I of the proving test process begins when one of the following occurs:

- An applicant for a certificate establishes the Schedule of Events

- An operator advises the Certificate Holding District Office of an intent to acquire a new aircraft type

(2) For validation tests, this phase begins when one of the following occurs:

- An operator proposes to operate over routes requiring a special navigation authorization

- An operator acquires new equipment that requires special performance or operational authorization

B. *Phase II.* Phase II begins when the operator/-applicant submits the test plan to the FAA for evaluation. During this phase, the team leader must ensure the plan, as submitted, is complete and the format is acceptable for a thorough review and analysis to be conducted.

C. *Phase III.* Phase III consists of the inspectors thoroughly reviewing the submitted plan.

(1) The review should ensure compliance with regulatory requirements and the logical sequencing of events.

(2) During this phase, close coordination must be maintained between the Administrator and the operator/applicant. The operator/applicant should be advised by letter of the results of the review. This review should take place within five days of the plan's submittal.

D. *Phase IV.* Phase IV is the demonstration phase.

(1) For proving tests, the operator/applicant conducts both en route and non-en route segments of the test for FAA observation.

(2) For validation tests, the operator conducts specific operations to accomplish one of the following:

- Collect verification data

- Provide a flight/operation for FAA observation

E. *Phase V.* After successfully completing a proving/-validation test, the Certificate Holding District Office approves the operations specifications and completes the appropriate test report.

13. PROVING TEST REQUIREMENTS

A. For proving tests to be acceptable, the operator/-applicant must demonstrate the ability to operate according to the operating and maintenance regulatory requirements that would apply if the operator were fully certificated and held the necessary authorizations. Only the following types of flights can be credited toward proving tests:

(1) Representative en route flights conducted under the provisions of FAR Parts 121 or 135, applicable sections of FAR Part 91, and other applicable rules

(2) Training flights observed by an FAA inspector, if the aircraft is maintained according to the proposed maintenance/inspection programs

B. The minimum time requirements for proving tests under Part 121 are as follows:

(1) *Newly Manufactured Aircraft.* FAR § 121.163(a) requires a minimum 100 hours of proving tests to include 10 hours of night flight, in addition to the aircraft certification tests. This applies to new aircraft manufactured in the U.S. or any foreign-manufactured aircraft not previously operated by a U.S.-certificated operator.

(2) *Aircraft New to the Operator.* FAR § 121.163(a)(1) requires at least 50 hours of proving tests by an operator/-applicant proposing to use a type of aircraft that has been proven previously by another FAR Part 121 operator.

(3) *Materially-Altered Aircraft.* FAR § 121.163(a) requires an operator/applicant to conduct at least 50 hours of proving tests when the type of aircraft to be used has been materially altered in design. Examples of materially altering an aircraft design include the following:

- Installation of engines that differ in type from those originally installed on the aircraft for type certification

- Any design alterations that significantly affect flight characteristics, e.g., wing or fuselage extensions

C. Proving tests under FAR Part 135 are required only when those operations are conducted with turbojet aircraft or aircraft requiring two pilots for operations under Visual Flight Rules.

(1) At least 25 hours of proving tests must be flown when an operator has not previously operated that aircraft or an aircraft of the same make and similar design in any operations under Part 135.

(2) At least 25 hours of proving tests must be flown when an aircraft used by the operator has been significantly altered in design. Significant alterations in the design of an aircraft include the following:

- Installation of engines that differ in type from those originally installed on the aircraft for type certification

- Any design alteration that significantly affects flight characteristics, e.g., short take-off and landing modifications

D. *Airport Operations.* An operator must conduct a representative number of proving tests into airports that the operator plans to serve in operation specifications-approved scheduled/unscheduled operations. If an operator plans to provide service to airports in more than one area (domestic and overseas), the operator must conduct proving tests into a representative number of those areas. The Administrator will determine what constitutes a representative airport or area of en route operation.

E. *Carriage of Passengers/Cargo.* The carriage of revenue passengers on a proving test is strictly prohibited. The carriage of mail, express, or other revenue cargo is permitted when the operator/applicant has the appropriate Department Of Transportation (DOT) economic authority.

F. *Deviations.* The only deviations authorized by regulations are to the required number of proving test flight hours.

G. *Predemonstration Meetings*

(1) The proving team shall conduct predemonstration test meetings to accomplish the following:

(a) Provide members with assignments, schedules for flight times and locations, and inspection and reporting requirements

(b) Determine the means of testing the operator/-applicant's ability to deal with simulated and/or actual operational contingencies within the limits of the proposed program. Scenarios must be clearly understood by and coordinated with each member of the team in terms of individual roles and responsibilities. The proving test team leader must ensure:

- That the operator is not encumbered with so many simulated situations that a realistic evaluation of the proposed operation is hindered

- That emergency or other simulated situations, when appropriate, are well-coordinated with other agencies such as Air Traffic Control or airport authorities, as required

NOTE: All simulated scenarios must be terminated immediately if an actual emergency occurs.

(2) The following are examples of typical scenarios that may be used in evaluating the operator's capabilities:

(a) Diversion to alternative airports for reasons such as weather or maintenance. This would test the company's communications, maintenance, and other operational capabilities.

(b) Minimum Equipment List (MEL) or Configuration Deviation List (CDL) situations that test the operator/-applicant's operations and maintenance procedures, e.g., a simulated inoperative generator

(c) Problems that will demonstrate the operator/-applicant's competency and knowledge of areas such as aircraft performance, airport analysis programs, and alternative company procedures, e.g., simulating an inoperative anti-skid or thrust reverser while operating on a runways contaminated with ice, slush, or snow.

(d) Maintenance problems that will demonstrate:

- The availability of spare parts, special tools and equipment, and sufficient competent, trained personnel, if applicable

- The effectiveness of maintenance procedures

- The availability of contracted support agencies, if required, e.g., fueling, deicing, and non-routine maintenance

(e) Problems that will cause the operator/-applicant to use alternative weight and balance procedures, if the normal system is a computer-based system

(f) Problems that will demonstrate the operator/applicant's ability to function according to established company procedures and FAA regulations for security and hazardous cargo situations

(g) Operational situations that exercise dispatch, flight following, or flight locating centers to test communications, weather information dissemination, and other flight information distribution abilities

(h) Simulated aircraft emergencies, such as engine failure or landing gear retraction/extension problems

NOTE: Under no circumstances shall an inspector require an actual engine shutdown.

(i) Specific simulated emergencies, if applicable:

- Incapacitated passengers in need of immediate medical assistance

- Lavatory or cargo fires

- Loss of pressurization

- Unruly passenger who interferes with a crewmember

11. VALIDATION TEST REQUIREMENTS

A. Validation tests shall be conducted for the following reasons:

- When directed by AFS-1 or the principal inspector

- When FAR Part 121, Subparts E and F, and § 135.13 require an operator to demonstrate that it can satisfactorily conduct the operations for which it is seeking FAA authorization

B. After the operator has successfully demonstrated the ability to meet all requirements, the FAA approves the specific authorizations. FAR Parts 121 and 135 require these specific authorizations to be included in the operations specifications.

(1) The requirements for validation tests are derived from different regulations than the requirements for proving tests. However, validation tests are often conducted in conjunction with proving tests.

(2) The validation tests must be specifically designed and tailored to the individual situation(s) of the operator.

C. Validation tests may consist of a single flight operation or a series of flight operations. As regulations do not specify a required number of hours or flights, this is determined by the Administrator. Depending on the type of validation test, it may be necessary for an inspector to observe each flight or require the operator to keep records of a series of flight operations for FAA evaluation.

D. In certain situations, the FAA may grant an interim authorization, such as an authorization to conduct Category II operations with higher minimums. This interim authorization allows:

- FAA observation and evaluation of the proposed line operation

- Data collection by the operator for FAA evaluation

E. Successful completion of all validation tests is required before a final authorization is granted.

F. Operational situations that require a special navigation authorization and normally require validation tests include the following:

(1) A situation where an operator proposes to operate a specific aircraft for the first time into an area requiring the use of special navigation equipment and/or procedures. These situations can include the following:

- Operations in remote and extensive land areas with questionable or degraded surface or space-based navigation facilities
- Operations over extended overwater areas that do not have adequate surface or space-based navigation facilities
- Operations in extensive areas of magnetic unreliability
- Operations in North Atlantic Minimum Navigation Performance Specifications (NAT/MNPS) airspace. See Advisory Circulars 91-49, General Aviation Procedures for Flight in North Atlantic Minimum Navigation Performance Specifications Airspace, as amended, and 120-33, Operational Approval of Airborne Long-Range Navigation Systems for Flight Within the North Atlantic Minimum Navigation Performance Specifications Airspace, as amended, and the Minimum Navigation Performance Specifications Operations manual.
- Operations in North Pacific (NOPAC) airspace. See North Pacific Operations manual.
- Operations in Arctic Ocean and Antarctica airspace
- Low-level aircraft off-shore operations that do not have adequate surface or space-based navigation facilities

(2) An operator who proposes to use the following special navigation equipment in a specific aircraft when that operator has not previously used the equipment in that aircraft:

- Area navigation systems certified according to Advisory Circular 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System, as amended
- LORAN-C navigation systems. See Advisory Circular 20-121, Airworthiness Approval of Airborne Loran-C Systems for Use in the U.S. National Airspace System, as amended
- OMEGA/VLF navigation systems. See Advisory Circular 20-101, Omega and Omega/VLF navigation Systems Approvals for Use in the Conterminous United States and Alaska, as amended
- Inertial navigation systems. See Advisory Circulars 25-4, Inertial Navigation Systems (INS), as amended, and 121-13, Self-Contained Navigation Systems (Long Range), as amended
- Doppler navigation systems
- Global Positioning Satellite navigational systems
- Any combination of the preceding systems

G. The following situations require validation tests, and may require additional maintenance tasks, procedures and limitations (Minimum Equipment List and maintenance) for each type of aircraft to be used by an operator:

- Extended-range operations with two-engine airplanes under FAR Part 121 over routes containing a point further than 1-hour flying time from an adequate airport. See Advisory Circular 120-42, Extended Range Operation With Two-Engine Airplanes, as amended, and Order 8300.10, Vol. 2, Ch. 82, Extended Range Operation With Two-Engine Airplanes.
- Unimproved runway operations

H. The following situations require special equipment and special operational authorization:

- Category II and III instrument approach and landing systems. See Advisory Circulars 120-29, Criteria for Approving Category I and Category II Landing Minima for FAR 121 Operators, as amended and 120-28, Criteria for Approval of Category III Landing Weather Minima, as amended

- Use of automatic landing systems for landing operations. See Advisory Circular 20-57, Automatic Landing Systems, as amended

- Use of manually flown flight control guidance systems approved for landing operations (heads-up or heads-down flight control systems)

- Use of airborne radar approach systems (ARA). See Advisory Circular 90-80, Approval of Airborne Radar Approach (ARA) Procedures for Helicopters to Offshore Platforms, as amended.

- Use of area navigation systems for approach and landing operations. See Advisory Circular 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System, as amended.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

(1) The inspector must have a thorough knowledge of the regulatory requirements of FAR Parts 121 or 135, as applicable.

(2) The inspector's training and/or experience level must meet one of the following:

- Successful completion of the Airworthiness Inspectors Indoctrination String Course and the Airworthiness Inspectors En Route Course

- For inspectors hired prior to the development of the String Course concept, satisfactory performance at a journeyman's level

(3) The inspector must have experience with FAR Part 121 and/or 135 operations.

(4) The inspector must be familiar with the operator/applicant's maintenance program.

(5) The inspector must have experience or training on the type of equipment being used.

B. *Coordination.* This task requires close coordination among avionics, maintenance, and operations inspectors and with the regional office.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 43 and 91

- FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Approvals, as amended

- Advisory Circular 20-57, Automatic Landing Systems, as amended

- Advisory Circular 20-101, Omega and Omega/VLF navigation Systems Approvals for Use in the Conterminous United States and Alaska, as amended

- Advisory Circular 20-121, Airworthiness Approval of Airborne Loran-C Systems for Use in the U.S. National Airspace System, as amended

- Advisory Circular 25-4, Inertial Navigation Systems (INS), as amended

- Advisory Circular 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System, as amended

- Advisory Circular 90-76, Flight Operations in Oceanic Airspace, as amended
- Advisory Circular 90-79, Recommended Practices and Procedures for the Use of Electronic Long-Range Navigation Equipment, as amended
- Advisory Circular 90-80, Approval of Airborne Radar Approach (ARA) Procedures for Helicopters to Offshore Platforms, as amended
- Advisory Circular 91-16, Category II Operations - General Aviation, as amended
- Advisory Circular 91-49, General Aviation Procedures for Flight in North Atlantic Minimum Navigation Performance Specifications Airspace, as amended
- Advisory Circular 120-28, Criteria for Approval of Category III Landing Weather Minima, as amended
- Advisory Circular 120-29, Criteria for Approving Category I and Category II Landing Minima for FAR 121 Operators, as amended
- Advisory Circular 120-31, Operational and Airworthiness Approval of Airborne Omega Radio Navigation Systems as a Means of Updating Self-Contained Navigation Systems, as amended
- Advisory Circular 120-33, Operational Approval of Airborne Long-Range Navigation Systems for Flight Within the North Atlantic Minimum Navigation Performance Specifications Airspace, as amended
- Advisory Circular 120-37, Operational and Airworthiness Approval of Airborne Omega Radio Navigational Systems as a Sole Means of Long Range Navigation Outside the United States, as amended
- Advisory Circular 120-42, Extended Range Operation With Two-Engine Airplanes, as amended
- Advisory Circular 121-13, Self-Contained Navigation Systems (Long Range), as amended
- North Atlantic Minimum Navigation Performance Specifications Air Space operations manual
- North Pacific (NOPAC) operations manual
- Operator's maintenance program
- Operator's submitted test plan

B. *Forms.* None.

C. *Job Aids*

- Figure 76-1, Proving/Validation Test Job Aid

5. PROVING TEST PROCEDURES

A. *Review the Operator/Applicant's Submitted Test Plan*

(1) The plan must contain at least the following information:

- The operator/applicant's point of contact
- A detailed schedule of events including the dates, times, and airports to be used
- The names and positions of all the operator/-applicant's participants for the proposed test schedule
- The names and affiliations of personnel, other than the operator/applicant's employees, whom the operator/applicant wants to participate in the test
- Other information that the Administrator may require

(2) After a complete review by all team members, the team leader will notify the operator/applicant of acceptance or required revisions.

B. *Conduct FAA Team Meetings.* The team leader will provide all participants with the following:

- Individual assignments and responsibilities
- A detailed schedule of events

(1) As a team, formulate and schedule a plan that will test the operator/applicant's capabilities and reactions.

(2) Ensure that the plan includes an inspection of the following:

- The operator/applicant's aircraft (see Vol. 3, Ch. 2, Conduct Spot Inspection of Operator's Aircraft)
- Line stations, both operator/applicant and contractor (see Vol. 2, Ch. 223, Conduct Evaluation of Operator/Applicant's Line Station)
- Servicing facilities - fueling and deicing (see Vol. 2, Ch. 227, Evaluate Operator's Refueling Procedures)

(3) Ensure that the plan includes surveillance of the operator/applicant's routine and non-routine maintenance procedures/performances, to confirm the following:

- The availability of parts, special tools, and adequately trained personnel
- The availability and effective utilization of company manuals (operations, maintenance, Minimum Equipment List/-Configuration Deviation List)
- The effectiveness of maintenance procedures

(4) Ensure that the plan includes the use of simulated problems, such as:

- Weather diversions
- Equipment failures/malfunctions
- Inflight/ground emergencies

C. *Conduct Meeting with Operator/Applicant.* Introduce team members and discuss the procedures to be followed during the test.

D. *Conduct Proving Test.* Accomplish the proving test flight per formulated plan (see Figure 76-1). Advise the operator/applicant of any discrepancies on the day that they occur. When a serious deficiency occurs that may be cause for rescheduling or terminating the proposed flights, advise the operator/applicant immediately.

NOTE: All simulated scenarios must be terminated immediately if an actual emergency occurs.

E. *Analyze Findings.* As a team, compare and evaluate individual and group findings to determine if discrepancies and/or deficiencies exist.

F. *Conduct Debriefing.* Conduct a meeting with the operator/applicant to discuss findings and necessary corrective actions. Notify the operator/applicant by letter of all deficiencies discussed.

7. TASK OUTCOMES FOR PROVING TESTS

A. *File PTRS Transmittal Form*

B. *Approve Operations Specifications Amendment.* When all deficiencies are resolved, approve/amend the operator's operations specifications (see Vol. 2, Ch. 84, FAR Part 121/135 Operations Specifications).

C. *Complete The Report*

(1) The inspection team must complete a report that explains how the operator/applicant demonstrated compliance with the applicable subparts of the regulations. The report must include:

- Records of all discussions and agreements made with the operator/applicant concerning actions taken to correct deficiencies

- The basis for FAA determinations of satisfactory corrective action

(2) The Certificate Holding District Office will forward one copy of the report within 30 days (through channels according to regional instructions) to the Aircraft Maintenance Division, AFS-300.

9. FUTURE ACTIVITIES FOR PROVING TESTS. None.

11. VALIDATION TEST PROCEDURES

A. *Review the Operator's Submitted Test Plan*

(1) The plan must contain at least the following information:

- The operator's point of contact
- A general schedule of events that may include flights, airports to be used, and dates
- Other information the Administrator may require

(2) After a complete review, the operator will be notified of acceptance or required revisions.

B. *Conduct FAA Team Meetings (As Required).* The team leader will provide all participants with the following:

- Individual assignments and responsibilities
- A detailed schedule of events

(1) Formulate and schedule a plan that will test the operator's capabilities and reactions.

(2) Ensure that the plan includes an inspection of the following:

- The operator's aircraft (See Vol. 3, Ch. 2)
- Line stations of both the operator and any contractors (see Vol. 2, Ch. 223)
- Servicing facilities - fueling and deicing, if applicable (see Vol. 2, Ch. 227)

(3) Ensure that the plan includes surveillance of the operator's routine and non-routine maintenance procedures and performances, to ensure:

- Availability of parts, special tools, and adequately trained personnel
- Availability and effective utilization of company manuals (operations, maintenance, Minimum Equipment List/Configuration Deviation List)
- Effectiveness of maintenance procedures

(4) Ensure that the plan includes the use of simulated problems, if applicable, such as:

- Weather diversions
- Equipment failures/malfunctions
- Inflight/ground emergencies

NOTE: All simulated scenarios must be immediately terminated if an actual emergency occurs.

C. *Conduct Meeting With Operator.* Introduce team member(s) and discuss the procedures to be followed during the test.

D. *Conduct Validation Flight(s).* Accomplish validation test flight(s) per formulated plan. Advise the operator as soon as possible of serious deficiencies that may be cause for rescheduling or terminating the proposed flights. FAA participation during these flights may not be required.

E. *Analyze Findings.* Evaluate the findings to determine if discrepancies or deficiencies exist.

F. *Conduct Debriefing.* Conduct a meeting with the operator to discuss findings and necessary corrective actions. The operator will be notified by letter of all deficiencies discussed.

13. TASK OUTCOMES FOR VALIDATION TESTS

- The basis for FAA determinations of satisfactory corrective action

(2) The Certificate Holding District Office will forward one copy of the report within 30 days (through channels according to regional instructions) to the Aircraft Maintenance Division, AFS-300.

9. FUTURE ACTIVITIES FOR PROVING TESTS. None.

11. VALIDATION TEST PROCEDURES

A. *Review the Operator's Submitted Test Plan*

(1) The plan must contain at least the following information:

- The operator's point of contact
- A general schedule of events that may include flights, airports to be used, and dates
- Other information the Administrator may require

(2) After a complete review, the operator will be notified of acceptance or required revisions.

B. *Conduct FAA Team Meetings (As Required).* The team leader will provide all participants with the following:

- Individual assignments and responsibilities
- A detailed schedule of events

(1) Formulate and schedule a plan that will test the operator's capabilities and reactions.

(2) Ensure that the plan includes an inspection of the following:

- The operator's aircraft (See Vol. 3, Ch. 2)
- Line stations of both the operator and any contractors (see Vol. 2, Ch. 223)
- Servicing facilities - fueling and deicing, if applicable (see Vol. 2, Ch. 227)

(3) Ensure that the plan includes surveillance of the operator's routine and non-routine maintenance procedures and performances, to ensure:

- Availability of parts, special tools, and adequately trained personnel
- Availability and effective utilization of company manuals (operations, maintenance, Minimum Equipment List/Configuration Deviation List)
- Effectiveness of maintenance procedures

(4) Ensure that the plan includes the use of simulated problems, if applicable, such as:

- Weather diversions
- Equipment failures/malfunctions
- Inflight/ground emergencies

NOTE: All simulated scenarios must be immediately terminated if an actual emergency occurs.

C. *Conduct Meeting With Operator.* Introduce team member(s) and discuss the procedures to be followed during the test.

D. *Conduct Validation Flight(s).* Accomplish validation test flight(s) per formulated plan. Advise the operator as soon as possible of serious deficiencies that may be cause for rescheduling or terminating the proposed flights. FAA participation during these flights may not be required.

E. *Analyze Findings.* Evaluate the findings to determine if discrepancies or deficiencies exist.

F. *Conduct Debriefing.* Conduct a meeting with the operator to discuss findings and necessary corrective actions. The operator will be notified by letter of all deficiencies discussed.

13. TASK OUTCOMES FOR VALIDATION TESTS

FIGURE 76-1 PROVING/VALIDATION TEST JOB AID

NOTE: Figure 76-1 should be used as an aid in gathering information prior to the test flight. Check the applicable spaces and fill in any required information.

I. OPERATOR/APPLICANT INFORMATION

A. FAR Part 121 Operator ____

1. New applicant ____

2. Existing operator ____

B. FAR Part 135 Operator ____

1. New applicant ____

2. Existing operator ____

C. Type of Airworthiness Certificate

1. Standard ____

2. Provisional ____

II. OPERATOR/APPLICANT'S FLIGHT PLAN INFORMATION

A. Company Coordinator (name) _____

B. Proving test schedule (attach itinerary)

1. Validation test included ____

2. Non-en route segment (50% maximum)

- Ferry flight hours to be credited ____
- Training flight hours to be credited ____

3. En route segment (at least 50% of total hours)

- Flight hours to be credited ____
- Representative airports (attach list)
- Representative areas of operation (attach list)

B. Regulatory hours required (check one of the four)

1. FAR Part 121 Aircraft not previously proved ____

2. FAR Part 121 aircraft previously proved ____

3. FAR Part 135 aircraft ____

4. 10 hours of night flight ____

C. Requested Deviations

1. Total proposed reduced hours ____

2. Total approved reduced hours ____

3. Total non-en route hours ____

4. Total en route hours ____

5. Total night hours ____

D. Involved Personnel

1. Names and positions of flight crewmembers (attach list)

2. Names and titles of company nonflight crewmembers (attach list)

3. Names and positions of other operator/applicant participants (attach list)

4. Names, titles, and affiliation of noncompany participants, such as engine and aircraft representatives (attach list)

CHAPTER 78 PROCESS FAR PART 121/135.411(a)(2) OPERATOR AIRCRAFT/ENGINE UTILIZATION REPORT

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3321

B. *Avionics:* 5321

3. OBJECTIVE. This chapter describes the procedures necessary to process an operator's monthly engine utilization report as required by FAR §§ 121.705 and 135.417.

5. GENERAL

A. The monthly engine utilization report provides the Operational Systems Branch, AVN-120, with a record of certain statistics on carriers operating under FAR Parts 121 and 135. These records are used in planning, directing, controlling, and evaluating assigned programs.

(1) The responsibility for completing and submitting the report rests with the assigned inspector. The inspector must obtain the needed data under the authority contained in FAR §§ 121.81, 121.705, 135.73, and 135.417.

(2) AVN-120 must receive this report by the 15th of each month. To ensure processing requirements are met, the data should be received from the operator by the 7th of each month.

B. AVN-120 reviews the reports received from district offices to ensure the data is properly prepared for Automatic Data Processing (ADP). AVN-120 will review all computer-prepared reports to assure they are complete and accurate.

C. AVN-120 issues the "Aircraft Utilization and Propulsion Reliability Report." Distribution of the report shall be according to the established mailing list it contains.

D. *Utilization Report Improvements.* Correspondence concerning the improvement of the utilization report system and significant problems found in using this system should be addressed to the Operational Systems Branch, AVN-120.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of regulatory requirements of FAR Parts 121 and 135
- Successful completion of the Airworthiness Inspectors Indoctrination Course

B. *Coordination.* This task requires coordination between the inspector and the operator to ensure timely submission of data.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References.* None.

B. *Forms*

- AC Form 8320-1, Air Carrier Aircraft Engine Utilization Report

C. *Job Aids*

- Figure 78-1, Daily Utilization Calculations

5. PROCEDURES

A. *Prepare Report.* Each month the assigned inspector shall obtain from the air carrier(s) the information to complete the monthly engine utilization report. The report is to be typewritten and submitted on AC Form 8320-1, Air Carrier Aircraft Engine Utilization Report. The following information must be completed:

(1) Operator Designation: Enter the operator's four-character maintenance designator in this block

(2) Month/Year

(3) Operator name

(4) Operator's certificate number

(5) Inspector's name

(6) Region/district office

(7) Aircraft manufacturer: The one to two number designator for the manufacturer (code contained on back of Form 8320-1)

(8) Aircraft Model: See type certificate data sheets for model designation

(9) Number of aircraft: Those authorized for revenue service by approved operations specifications/aircraft listing

(10) Engine manufacturer: A one to four character abbreviation for the engine manufacturer, Ref. Order 8010.2, (code contained on back of Form 8320-1)

(11) Engine model: See type certificate data sheets for model designation

(12) Number of engine shutdowns: The number of engine shutdowns for cause, not to include training, demonstrations, or flight check purposes

(13) Number of engine removals: Engines removed prematurely due to mechanical malfunctions, not to include engines removed for company convenience

(14) Time between overhauls (TBO)

(15) Hot section inspection time

NOTE: If times are controlled by maintenance program, enter type of program, i.e. Condition Monitoring (CON MON), Logical Information Based on Reliability (LIBRA), etc.

(16) Type of operation. Use the following:

- A - Domestic and/or Flag
- B - Supplemental/Scheduled cargo
- C - Scheduled intrastate
- G - Commuter

(17) Aircraft total hours: Fleet flight hours for each model to the nearest whole hour

(18) Hours per Day

(a) To calculate daily utilization, divide total aircraft fleet hours by the number that results from multiplying the total number of aircraft by the total number of days in the month. See Figure 78-1, Daily Utilization Calculations.

(b) If aircraft are added or deleted from the fleet during the reporting month, count only the days that the aircraft were on the operations specifications or aircraft listing. See Figure 78-1.

NOTE: Enter the Aircraft Total Hours to the nearest whole hour.

(19) Engine total hours: Number of engines per aircraft times Aircraft Total Hours

(20) Remarks: Inspector's remarks and comments, e.g., type of engine program and revisions, TBO/Hot Section Inspection Time revisions, deletion and addition of aircraft to operations specifications, including date and N-number, etc.

B. *Submit Report.* Submit the original report to the Aviation Standards National Field Office, Operational Systems Branch, AVN-120, Federal Aviation Administration, P.O. Box 25082, Oklahoma City, OK 73125.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. *Document Task.* File a copy in the Certificate Holding District Office file.

9. FUTURE ACTIVITIES. Normal surveillance.

FIGURE 78-1
DAILY UTILIZATION CALCULATIONS

(a) To calculate daily utilization, divide total aircraft fleet hours by the number that results from multiplying the total number of aircraft by the total number of days in the month.

No. AC	Days in Month	AC Total Hours	Daily Utilization
10	31	1615	5.2

10 X 31 = 310 AC days

1615/310 = 5.2 Daily Utilization

(b) If aircraft are added or deleted from the fleet during the reporting month, count only the days that the aircraft were on the operations specifications or aircraft listing.

No AC	Days in Month	AC Total Hours	Daily Utilization
10	31	1615	5.2
1	15 (On op/sp)	75	

10 X 31 = 310 + 15 = 325 AC days

1615 + 75 = 1690 AC Total Hours

1690/325 = 5.2 Daily Utilization

CHAPTER 82 EVALUATE FAR PART 121 EXTENDED-RANGE OPERATIONS WITH TWO-ENGINE AIRCRAFT (ETOPS)

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3319

B. *Avionics:* 5319

3. OBJECTIVE. This chapter describes the process of evaluating a FAR Part 121 operator for a deviation under FAR § 121.161(a) for extended-range operations with two-engine airplanes.

5. GENERAL

A. *Definition:*

- *Extended-Range Operation With Two-Engine Airplanes (ETOPS):* Operations conducted over a route containing a point further than one hour flying time at the normal one-engine inoperative cruise speed (in still air) from an adequate airport

B. An ETOPS authorization requires an approval from the Director, Flight Standards Service, for a deviation to the operating rule of FAR § 121.161. To meet the requirements of this deviation the operator must be able to:

(1) Substantiate that the type design reliability and the performance of the proposed airplane/engine combination have been evaluated per the guidance in Advisory Circular 120-42, Extended-Range Operation With Two-Engine Airplanes, as amended, and found suitable for extended range operations

(2) Submit an application package that includes supplemental maintenance requirements and programs that allow for safe operations under an ETOPS authorization.

C. *Application Package.* The application package must include the following programs:

(1) *Supplemental maintenance program.* This program must include the basic maintenance program with additional ETOPS requirements for the airplane being considered. These requirements should include maintenance procedures that prevent actions such as changing oil filters, chip detectors, fuel controls, etc., from being done simultaneously on both engines.

(2) *Verification program.* This program must have procedures that would preclude an airplane from being dispatched for extended range operation unless appropriate corrective actions have been taken and verified, after any of the following situations:

- A propulsion system shutdown
- A primary system failure
- Any significant adverse trends/repeat problems from a previous flight

(3) *Airframe/Engine condition monitoring program.* Condition monitoring should provide a system for data collection that ensures the timely analysis and correction of engine problems. This program should accomplish the following:

- Prevent in-flight shutdowns of powerplant systems through detection of early stage deterioration
- Ensure that engine limit margins are maintained so that a prolonged single-engine diversion may be conducted without exceeding approved engine limits (i.e., rotor speeds, exhaust gas temperature, etc.) at all approved power levels and expected environmental conditions

(4) *Reliability program.* This must be an event-oriented reliability program designed primarily to identify and prevent problems. This program must incorporate reporting criteria for use by the carrier and the FAA as a measure of extended range reliability. The ETOPS reliability program can be a supplement to an existing reliability program if the existing program is event-oriented.

(5) *Engine/APU oil consumption monitoring program.* This program must monitor oil consumption on a flight-by-flight basis. This monitoring must take into account the amount of oil added at the departing ETOPS stations with a reference to the running average consumption. Additionally, prior to each extended range leg, the program must verify the oil system integrity.

(6) *Extended range parts control program.* This program should ensure that distinct ETOPS parts, as required by the type design criteria, are utilized to maintain the integrity of systems unique to ETOPS. This program must consider verification of parts placed on the aircraft through parts borrowing and pooling agreements. For further information see Vol. 2, Ch. 87, Approve Parts/Parts Pool/Parts Borrowing.

(7) *Maintenance training program.* The training program should focus on extended range awareness for all personnel involved in the extended range maintenance program. It may be included in the normal maintenance training but should emphasize the special nature of extended range maintenance requirements.

(8) *Continuing analysis and surveillance program.* The air carrier's normal continuing analysis and surveillance program should be supplemented to require regular surveillance of the extended range program. This supplemented program must ensure the continued integrity of the ETOPS maintenance programs while allowing for program adjustments, as required.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 121
- Knowledge of Advisory Circular 120-42, Extended-Range Operation With Two-Engine Airplanes, as amended
- Successful completion of the Air Carrier Airworthiness Inspectors Indoctrination String Course
- Successful completion of the Aircraft Maintenance Reliability Program Course, as available
- Successful completion of the Aircraft Systems Training Course, as available

B. *Coordination*

(1) This task requires coordination among maintenance inspectors, avionics inspectors, Regional offices, AFS-400, and AFS-300, as required.

(2) For questions regarding an ETOPS authorization, contact the following, as required:

- AFS-330, Maintenance Division
- Aircraft Evaluation Group (AEG)
- Aircraft/Engine Certification Directorate

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Operator's manuals
- Operations Specifications

B. *Forms*

- FAA Form 8400.8, Operations Specifications

C. *Job Aids.* None.

5. PROCEDURES

A. *Verify the Compliance of the Aircraft With the Configuration, Maintenance, and Procedures Document.* Verify compliance through coordination with the Aircraft Maintenance Division and the Aircraft Evaluation Group.

B. *Evaluate the Operator's Current Maintenance Program.* Request and evaluate the following information for ETOPS suitability:

(1) The date of type design and the review of each engine/airframe combination

(2) The in-service experience for each engine/airframe combination, to include the following:

(a) The number of months/years of operational experience with each specific engine/airframe combination

(b) The total number of ETOPS and/or domestic operations conducted with the specific engine/airframe

(c) The engine/airframe hours and cycles, to include both total and high time engines

(d) The in-flight shutdown rate (all causes), including the 12-month and 6-month rolling average for both the ETOPS and the world fleet

(e) The unscheduled engine removal rate for both the world fleet and the operator

(f) The mean time between failure (MTBF) for major components

(g) The record of APU start and run reliability

(h) The records of delays and cancellations, with the causes, by the specific aircraft systems

(i) The records of significant operator events, including the phase of flight where the event occurred, such as:

- Uncommanded power changes (surge or rollback)
- Inability to control engine or obtain desired power
- In-flight shutdown events

C. *Review the Operator's Manual.* The inspector must ensure that the following programs and procedures have been included as part of the operator's supplemental maintenance program:

(1) Verification program, to include:

- A list of primary systems
- Conditions that require verification flights
- Procedures for initiating verification actions
- Procedures that monitor and evaluate corrective actions
- Procedures that verify the implementation of corrective action
- Procedures that preclude repeat items from occurring
- Procedures that identify and reverse the adverse trends

(2) Engine condition monitoring program, to include:

- Scope of program, e.g., data collection and analysis
- Notification procedures for deterioration
- Deterioration monitoring limits for internal engine parts

(3) Reliability program, to include:

- Reporting criteria
- Procedures to ensure reporting of significant individual events (engine shutdowns, flight diversions, etc.)

(4) Engine/APU oil consumption monitoring program, to include:

- Established limits of consumption
- Procedures for use and verification prior to the start of each extended range leg

(5) Extended range parts control, to include:

- Methods of verification of proper parts
- Control procedures during parts pooling and borrowing

(6) Maintenance training program, to ensure:

- Personnel are aware that an ETOPS authorization is in place

- Personnel, including contract personnel, are adequately trained on the special programs required by an ETOPS authorization

(7) Continuing analysis and surveillance program, to include:

- Ensuring the continued integrity of the ETOPS maintenance programs
- Ensuring that adjustments are made, as required, to the ETOPS programs

(8) Procedures that accomplish the following:

- Preclude simultaneous actions from being applied to multiple similar elements in any ETOPS-critical system
- Identify ETOPS-related tasks on routine work forms and related instructions
- Develop an ETOPS over-water service check to verify the status of the airplane and ensures certain critical items are acceptable

D. *Analyze Results*

(1) If problems are found, return the material to the operator.

(2) If the submitted material is acceptable, forward the material to the Region for submittal. The Region will forward the material to AFS-300 for concurrence and to AFS-1 for final deviation approval.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Successful completion of this task will result in the following:

- An Extended-Range Operation With Two-Engine Airplanes Authorization
- Amendment to the Operations Specifications, paragraphs D86 and D86-1
- Notification sent to AEU of the deviation. The notification must include the operator's locations of dispatch.

C. *Document Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

CHAPTER 87 APPROVE PARTS/PARTS POOL/PARTS BORROWING

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3316

B. *Avionics:* 5316

3. OBJECTIVE. This chapter provides guidance in evaluating and approving aircraft parts, a FAR Part 121 parts pool, and a FAR Part 121 and 135 (10 or more) parts borrowing authorization.

5. GENERAL

A. *Definitions*

(1) *Articles:* Materials, parts, or appliances.

(2) *Operator Manufactured Parts:* Parts manufactured and documented by the operator for use only on that operator's aircraft. The parts must comply with the original type design and cannot be part of a pool or borrowing agreement.

(3) *Parts:* Any engine, propeller, component, accessory, material, or hardware used on an air carrier aircraft.

(4) *Parts Manufacturer Approval (PMA):* PMA parts are parts produced by manufacturers other than the type certificate holder. These parts must be identical to parts covered under a type certificate, and they must be marked as such. FAA manufacturing inspectors or a manufacturer with parts manufacturer approval authority may approve these parts for use.

(5) *Supplemental Type Certificate (STC):* When a major change in type design does not require a new application for a type certificate, a supplemental type certificate is issued. Parts manufactured under a supplemental type certificate are approved under the supplemental type certificate.

(6) *Technical Standard Order (TSO):* A technical standard order is a minimum performance standard for specified articles used on civil aircraft, and is issued by FAA Engineering. These articles may be used on a variety of equipment items.

(7) *Type Certificate (TC):* As defined by FAR § 21.41, a type certificate includes the type design, operating limitations, type certificate data sheet, applicable regulations, and any other conditions or limitations prescribed by the Administrator.

B. An operator must ensure that all replacement parts meet or exceed original certification standards. Standard hardware and materials can be used and exchanged without special procedures. When special requirements must be met, accurate documentation must be maintained. Purchase, use, and exchange of parts require special procedures that must be part of the operator's manual, and in certain circumstances, part of the operator's operations specifications.

7. PARTS POOL AGREEMENT AUTHORIZATIONS. These authorizations apply only to FAR Part 121 operators operating outside the U.S.

A. When operating under this authorization, all other provisions of FAR Part 121 remain applicable. In addition, FAR § 121.361(b) requires surveillance of the foreign facilities and their procedures to ensure that all work on pooled parts is performed according to the operator's manuals.

B. These authorizations are approved by issuance of operations specifications. The operations specifications are required only to list those participants (and their locations) inspected by the operator and acceptable to the FAA.

(1) In instances where several U.S. certificated operators use a foreign facility, the FAA does not object to a participating operator accepting another participating operator's initial or biennial inspection report, provided the operator's manual reflects the arrangement.

(2) When a U.S. parts pool participant's operations specifications are amended to reflect a new participant or location, all U.S. participants in the pool must amend their operations specifications to reflect the change.

(3) FAR § 121.361 permits deviation allowing the return to service and use of airframe components, powerplants, appliances, and spare parts thereof that have been maintained, altered, or inspected by persons employed outside the United States who do not hold U.S. airman certificates.

The operator's operations specifications authorize this deviation.

C. *Foreign Facility Inspections*

(1) The Certificate Holding District Office (CHDO) with geographical responsibility for the foreign facility conducts the parts pool inspection. Foreign facilities that do not have an appropriate repair station rating should be inspected annually.

(2) The operator must have in its manual procedures to inspect the parts pooling facilities. The manual also must include procedures to ensure the maintenance of parts according to the operator's maintenance manuals.

9. PARTS BORROWING AUTHORIZATION

A. A certificate holder operating under FAR Part 121 or § 135.411(a)(2) may be issued operations specifications to allow it to borrow a part with a higher time since overhaul than authorized, subject to certain conditions and limitations. Since no regulations govern this activity, the operations specifications must specify that the operator can borrow a part from another operator when the time in service of the available part exceeds the operator's approved overhaul time limit. The parts, however, cannot exceed the lender's approved time limits.

B. If the number of landings controls the part's service or overhaul time limit, an operator may borrow and use a part for a maximum of 100 hours or 50 landings when the time in service of the part exceeds the borrower's approved time limits. The following limitations must be met:

(1) The part must have a minimum time of 200 hours or 100 landings (if approved time is controlled by landings) remaining before service or overhaul in the lender's program

(2) If the part is life limited, the part may not be operated beyond its approved life limit

11. PARTS APPROVAL

A. Under present regulations, the FAA does not have the authority to prevent the sale or use of aircraft parts of questionable serviceability. Although it is the operator's responsibility to be aware of the possible consequences of using questionable parts on certificated aircraft, the inspector should offer guidance to help prevent possible problems. An operator using a part of unknown quality, condition, or origin must be able to prove conclusively that such parts conform to the provisions of FAR § 43.13.

B. The operator is responsible for maintaining parts in a condition that ensures the parts continue to meet the original type design. Procedures to ensure this proper maintenance must be part of the operator's manual.

C. The FAA has a parts manufacturing approval system in effect that allows the FAA to control the sale of reproduction parts. Parts manufactured under this system must display evidence of FAA approval, verifying the origin and serviceability.

D. Repair stations or air carriers may manufacture replacement parts as part of their maintenance program. These parts are acceptable, provided they are manufactured according to acceptable FAA approved data.

E. Parts, appliances, and components from aircraft that have been involved in accidents or crashes are available to the industry as replacements. FAR § 43.13 requires that serviceability is assured before use.

F. Ex-military aircraft now under civilian type certificates create parts problems, particularly when the original manufacturer has ceased production. Certain parts of original manufacture are available for a given aircraft for a number of years after its departure from military status. If original manufacturer fabrication can be substantiated for such parts, they are acceptable providing they comply with all applicable airworthiness directives.

G. Certain parts for ex-military or currently manufactured aircraft are and have been scarce. Occasionally, parties other than the original or approved manufacturer produce these parts illegally and offer them for sale. These illegal parts constitute a hazard to flight safety.

H. Parts manufactured in foreign countries and supplied to U.S. certificated operators for use on their aircraft must be imported according to FAR § 21.502.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 121 and 135
- Successful completion of the Airworthiness Inspectors Indoctrination Course

B. *Coordination.* This task requires coordination between the involved airworthiness inspectors and the operator. Regional coordination may be necessary.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR §§ 21.301 thru 21.305, 43.13, 121.379, 121.361(b), and 135.411(a)(2)
- Advisory Circular 20-62, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts, as amended
- Advisory Circular 43.13-1, Acceptable Methods, Techniques and Practices -- Aircraft Inspection and Repair, as amended

B. *Forms*

- FAA Form 8400-8, Operations Specifications

C. *Job Aids*

- Automated operations specifications checklists and worksheets

5. PROCEDURES

A. *Review Operator's Manual For Parts Pool Authorization.* Ensure the manual includes:

(1) Procedures to ensure qualified personnel of the operator's organization perform an initial inspection of the involved foreign facilities. This inspection should ensure that facilities meet the certificate holder's manual requirements, have properly qualified and trained personnel, and can furnish the parts intended.

(2) Procedures to provide for biennial inspections of the foreign facilities to ensure continued conformity to the operator's manual in supplying the required parts

(3) Inclusion of, or reference to, the foreign facilities' maintenance programs in the operator's manual, if applicable

B. *Inspect the Parts Pool Authorization Facility.* The inspector from the CHDO with geographic responsibility must inspect the facility according to Vol. II, Ch. 221.

C. *Review Operator's Manual For Parts Borrowing Authorization Procedures*

(1) Ensure the manual includes the following procedures:

(a) Procedures that restrict the overhaul time limits to those authorized by operations specifications

(b) Procedures that restrict a remaining minimum time to overhaul to that authorized by operations specifications

(2) Ensure the operator has an approved list of authorized vendors, repair stations, and air carriers from which it may borrow parts.

D. *Analyze Results.* Advise the operator of any deficiencies discovered during the inspection. Schedule a meeting with the operator to discuss and/or resolve the problem area(s).

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Successful completion of this task will result in issuance of the following operations specifications:

- Parts Pooling Authorization, Operation Specifications Paragraph D81

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 121 and 135
- Successful completion of the Airworthiness Inspectors Indoctrination Course

B. *Coordination.* This task requires coordination between the involved airworthiness inspectors and the operator. Regional coordination may be necessary.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR §§ 21.301 thru 21.305, 43.13, 121.379, 121.361(b), and 135.411(a)(2)
- Advisory Circular 20-62, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts, as amended
- Advisory Circular 43.13-1, Acceptable Methods, Techniques and Practices -- Aircraft Inspection and Repair, as amended

B. *Forms*

- FAA Form 8400-8, Operations Specifications

C. *Job Aids*

- Automated operations specifications checklists and worksheets

5. PROCEDURES

A. *Review Operator's Manual For Parts Pool Authorization.* Ensure the manual includes:

(1) Procedures to ensure qualified personnel of the operator's organization perform an initial inspection of the involved foreign facilities. This inspection should ensure that facilities meet the certificate holder's manual requirements, have properly qualified and trained personnel, and can furnish the parts intended.

(2) Procedures to provide for biennial inspections of the foreign facilities to ensure continued conformity to the operator's manual in supplying the required parts

(3) Inclusion of, or reference to, the foreign facilities' maintenance programs in the operator's manual, if applicable

B. *Inspect the Parts Pool Authorization Facility.* The inspector from the CHDO with geographic responsibility must inspect the facility according to Vol. II, Ch. 221.

C. *Review Operator's Manual For Parts Borrowing Authorization Procedures*

(1) Ensure the manual includes the following procedures:

(a) Procedures that restrict the overhaul time limits to those authorized by operations specifications

(b) Procedures that restrict a remaining minimum time to overhaul to that authorized by operations specifications

(2) Ensure the operator has an approved list of authorized vendors, repair stations, and air carriers from which it may borrow parts.

D. *Analyze Results.* Advise the operator of any deficiencies discovered during the inspection. Schedule a meeting with the operator to discuss and/or resolve the problem area(s).

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Successful completion of this task will result in issuance of the following operations specifications:

- Parts Pooling Authorization, Operation Specifications Paragraph D81

CHAPTER 88 PRORATED TIME AUTHORIZATIONS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3316

B. *Avionics:* 5316

3. OBJECTIVE. This chapter provides guidance in determining the prorated time for an item.

5. GENERAL

A. Proration is a procedure to determine the time consumed under one maintenance system and to establish the remaining time under a new system.

B. Operators often sell or lease their equipment to other operators. This "used" equipment will have accumulated a certain amount of time in service. This time is transferred to the new operator and may be phased in or prorated to the new operator's approved time limitations.

C. When an operator's approved time limitations are not the same as those of the previous operator(s), the buyer has two options: direct inclusion or proration.

(1) When the operator chooses direct inclusion, the difference between the operator's approved time limit and the previous operator's actual time will determine the time limitation.

(2) When the previous operator's approved time limitations are different than that of the current operator, proration may be used to adjust the time limitations.

D. *Scope and Limitations*

(1) Proration in no way lessens an operator's responsibility to maintain the aircraft in an airworthy condition.

(2) Proration is optional.

(3) Life limited components may not be prorated.

(4) Proration may not be applied to times specified in Airworthiness Directives.

(5) Operators who have been operating equipment under FAR Parts 121 and 135 may use proration.

(6) Both adjusted and actual times must be shown on the proration document and the aircraft records.

(7) When an item is inspected or overhauled as appropriate, the applicable prorated time limits will be canceled. Thereafter, the item will be handled according to the operator's approved program.

(8) Partial proration is not acceptable. An operator electing proration must prorate the airframe and all of its installed powerplants, propellers, and appliances. Spare engines and propellers acquired at the time of sale or at a later date with "time in service" may be prorated.

(9) If an increase in a time limitation is approved for a certificate holder operating on prorated times, that increase will be credited to the prorated item(s).

(10) Amendments to a certificate holder's operations specifications that increase time limits are applicable to all aircraft of the same type and model operated by a carrier. Such time increases apply to aircraft operating on a prorated time basis, as well as to the other aircraft in the fleet.

E. *Foreign Air Carrier Aircraft.* Foreign air carrier aircraft for which there is a U.S. type certificate may be phased into a U.S. air carrier's program via proration. However, the U.S. operator must first present satisfactory evidence that the program under which the aircraft was maintained is at least equivalent to the new operator's program for a similar type of aircraft.

7. DATA AND COMPUTATION

A. Prorated time remaining can be determined by using the following mathematical procedures:

(1) Divide the actual time used by the previous operator's approved time limit under which the aircraft has been operated. The result, carried to three places, will represent the percentage of approved time already used.

(2) Multiply the new operator's time limit by the percentage of time used. This will result in the prorated time to be used under the new program.

(3) Subtract the prorated time from the time limit approved in the new program. The result will represent the number of hours remaining under the new program. (See Figure 88-1.)

B. *Block/Pattern Time Limitation*

(1) When block/pattern time is to be prorated, each block/pattern shall be treated as though a complete aircraft were being prorated.

(2) When the previous operator used a block/pattern system, a document must be submitted showing the following:

- Time limitation for each block or pattern, together with a list of items that are part of the block or pattern
- Time since accomplishment for each individual item on the aircraft

(3) For more information on block/pattern time limitations, see Advisory Circular 121-1, Standard Operations Specifications, as amended.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 121 and 135

B. *Coordination.* This task requires coordination between the inspector and the operator.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Advisory Circular 120-17, Maintenance Control by Reliability Methods as amended
- Advisory Circular 121-1, Standard Operations Specifications, as amended
- Operator's documentation, including operations specifications, for previous and new operator

B. *Forms*

- FAA Form 8400.8, Operations Specifications

C. *Job Aids*

- Figure 88-1: Proration Formula Example
- Advisory Circular 121-1, Appendix 1, Figures 1 through 12
- Automated operations specifications checklists and worksheets

5. PROCEDURES

A. *Receive Data from Applicant.* The operator must submit required information to the district office in which the operator's principle base of operation is located.

(1) The operator must submit all operations specifications containing the time limits utilized for the particular aircraft by the previous operator.

(a) If the operations specifications do not show hours, the operator must submit other documentation that will establish the time limits.

(b) If conversion to hours is necessary, the computations used for the conversion should be included.

(2) The operator must provide operations specifications pertinent to the particular aircraft.

(3) The operator must submit documents itemizing the following:

- Engines, propellers, and appliances that have different time limitations than the previous operator and are to be prorated. These will be listed by Air Transportation Association chapter numbering system, showing the name, part number, serial number, and position.
- The approved time under which the aircraft has been operated

(3) Subtract the prorated time from the time limit approved in the new program. The result will represent the number of hours remaining under the new program. (See Figure 88-1.)

B. *Block/Pattern Time Limitation*

(1) When block/pattern time is to be prorated, each block/pattern shall be treated as though a complete aircraft were being prorated.

(2) When the previous operator used a block/pattern system, a document must be submitted showing the following:

- Time limitation for each block or pattern, together with a list of items that are part of the block or pattern
- Time since accomplishment for each individual item on the aircraft

(3) For more information on block/pattern time limitations, see Advisory Circular 121-1, Standard Operations Specifications, as amended.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 121 and 135

B. *Coordination.* This task requires coordination between the inspector and the operator.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Advisory Circular 120-17, Maintenance Control by Reliability Methods as amended
- Advisory Circular 121-1, Standard Operations Specifications, as amended
- Operator's documentation, including operations specifications, for previous and new operator

B. *Forms*

- FAA Form 8400.8, Operations Specifications

C. *Job Aids*

- Figure 88-1: Proration Formula Example
- Advisory Circular 121-1, Appendix 1, Figures 1 through 12
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5. PROCEDURES

A. *Receive Data from Applicant.* The operator must submit required information to the district office in which the operator's principle base of operation is located.

(1) The operator must submit all operations specifications containing the time limits utilized for the particular aircraft by the previous operator.

(a) If the operations specifications do not show hours, the operator must submit other documentation that will establish the time limits.

(b) If conversion to hours is necessary, the computations used for the conversion should be included.

(2) The operator must provide operations specifications pertinent to the particular aircraft.

(3) The operator must submit documents itemizing the following:

- Engines, propellers, and appliances that have different time limitations than the previous operator and are to be prorated. These will be listed by Air Transportation Association chapter numbering system, showing the name, part number, serial number, and position.
- The approved time under which the aircraft has been operated

FIGURE 88-1
PRORATION FORMULA EXAMPLE

The example below demonstrates the simple steps involved in determining a buyer's time remaining to overhaul.

Known

Previous operator's approved overhaul time limit = 8,000 hours

Previous operator's time since overhaul (TSO) = 2,000 hours

Buyer's approved overhaul time limit = 12,000 hours

Step One

Divide the previous operator's TSO figure by the previous operator's approved overhaul time limit. Carry this out to three places. The result represents the percentage of approved overhaul time already used.

```
    .250
8,000/2,000.000
```

In this example, 25 percent is the result.

Step Two

Multiply the buyer's approved overhaul time limit figure by the decimal arrived at in Step One. The result is the prorated TSO to be used by the buyer.

```
 12,000
x .250
  3,000
```

In this example, 3,000 is the prorated TSO to be used by the buyer.

Step Three

Subtract the prorated TSO arrived at in Step Two from the buyer's approved overhaul time limit. The resulting figure will be the number of hours remaining to overhaul for the buyer.

```
 12,000
-3,000
  9,000
```

In this example, the buyer's prorated time remaining to overhaul is 9,000 hours.

CHAPTER 101 FAR PART 125 INTRODUCTION

Section 1 Applicability of FAR Part 125

1. PURPOSE. FAR Part 125 prescribes rules governing the operation of U.S.-registered civil airplanes with either a passenger seating configuration of 20 or more or a maximum payload capacity of 6,000 pounds or more, when common carriage is not involved.

3. CONDITIONS AND LIMITATIONS

A. A FAR Part 125 operator cannot conduct any operation that results directly or indirectly from holding out transportation to the public.

B. Only one operating certificate may be issued to any one person. A partnership is considered a single person even though it may consist of more than one individual or corporation. Since all involved parties are considered a single person, only one name can appear on the certificate.

C. Seating configuration is defined as the number of passenger seats authorized for use by the manufacturer's type certificate or production data, supplemental type certificate, or other FAA-approved data. The addition or removal of seats constitutes a major alteration and requires appropriate FAA approval.

5. OPERATIONS BY FOREIGN NATIONALS

A. FAR § 125.247 outlines inspection programs and maintenance requirements. It requires defects be corrected according to FAR Part 43. This includes the exclusive use of FAA-certificated and appropriately rated persons to approve the airplane for return to service. When a foreign national operates a U.S.-registered airplane entirely outside the United States, its territories, or possessions, only FAR § 125.247 applies.

B. Foreign nationals who wish to operate within the United States, its territories, or possessions, using U.S.-registered airplanes to which FAR Part 125 applies, must be certificated under FAR Part 125.

(1) The operator must apply to the Flight Standards District Office (FSDO) nearest the port of entry for a letter of authorization allowing entry into the United States for certification purposes. The request must include the following:

- Name, address, and telephone number of the operator
- Make, model, serial, and registration number of the airplane
- Where in the United States the airplane will be based
- A statement indicating that the purpose of the request is to enter the U.S. to obtain certification under FAR Part 125

(2) The district office shall review the request and, if appropriate, issue a letter of authorization. The letter must contain appropriate operating limitations and authorize flight over U.S. territory only.

Section 2 Deviations

1. GENERAL

A. FAR § 125.3 allows a person to request a deviation from any portion or all of FAR Part 125. It also specifies the method of petitioning for deviations.

B. Deviation authority may be granted depending on the circumstances of the operation and the justification provided by the applicant. The applicant must justify the request for each section from which deviation is sought. The FAA evaluation considers the applicant's record, experience with the particular type of airplane, compensation arrangements, airplane seating capacity, and company operating procedures.

3. LETTER OF REQUEST

A. A request for deviation must be by letter, preferably on company letterhead, not less than 60 days prior to the first date of intended operation. It must include all pertinent information concerning the proposed operations, including the following:

(1) Name and address of the applicant

(2) The sections from which deviation is sought

(3) Aircraft subject to the deviation, including:

- Aircraft make, model, serial, and registration numbers
- Number of passenger seats
- The applicant's experience with this type of airplane
- The types of operations and compensation planned
- Inspection program used, as applicable
- Special equipment installed, as applicable

(4) Airmen subject to the deviation, including name, certificate number and ratings, and experience

(5) Reasons and justification for the deviation, including any mitigating circumstances that qualify the operation for a deviation

(6) Actions to be taken by the applicant to ensure the maintenance of a level of safety equivalent to that provided in the rule

(7) The name and phone number of the person authorized to answer any questions regarding the request

B. Requests for deviation authority must be addressed to the nearest FSDO, per FAR § 125.3.

5. INSPECTOR RESPONSIBILITIES

A. In response to requests for deviation authority, the district office will accomplish the following:

- Verify that the information in the letter of request is correct
- Ensure that all appropriate information, including operational background history, is provided
- Determine whether to issue or deny the deviation

B. The FSDO will issue a deviation when it determines that, without compliance with all or part of FAR Part 125, the operator will safely and satisfactorily conduct the operation while providing the required level of safety.

7. USING THE DEVIATION AUTHORITY

A. The FSDO grants a deviation by letter, outlining the operations allowed by the deviation and the limitations that must be observed.

B. The applicant must incorporate into the operations specifications any granted deviation from specific sections.

C. Operators granted a deviation from all FAR Part 125 requirements must carry a copy of the letter of deviation in the airplane during all flight operations.

CHAPTER 102 EVALUATE FAR PART 125 OPERATOR

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3202

B. *Avionics:* 5202

3. OBJECTIVE. This chapter describes the process used to issue a FAR Part 125 operating certificate.

5. GENERAL

A. *Certification Process.* The certification process provides for interaction between the applicant and the FAA from initial inquiry to certificate issuance or denial. It ensures programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification process consists of five phases:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

B. *Change of Name.* A change of official name must be approached with care. A name change has the effect of a new certification; therefore, a new certificate and certificate number shall be issued.

7. PREAPPLICATION PHASE

A. *Preapplication Statement of Intent (PASI)*

(1) The submitted Preapplication Statement of Intent expresses an intent by the applicant to initiate certification. It also prompts the FAA to plan activities and commit resources. Therefore, a potential applicant should submit the Preapplication Statement of Intent only after reviewing the appropriate regulations and advisory material. The applicant should also consider certification and operation requirements for the following areas:

- Personnel
- Facilities
- Equipment
- Aircraft
- Administration

(2) The district office manager should use the Preapplication Statement of Intent to accomplish the following:

- Evaluate the complexity of the proposed operation
- Ensure trained and experienced inspectors are available to certificate the applicant
- Initiate district office and PTRS files on the potential applicant
- Obtain a precertification number

(3) The Preapplication Statement of Intent may be used by the regional office to assess the district office workload and to forecast staffing needs.

(4) The Aviation Standards National Field Office (AVN) maintains and assigns certificate and precertification numbers. Numbers are based on the type of operation proposed, as shown on the Preapplication Statement of Intent. The numbering system is automated and provides a data base of air operators and certificate status (active, cancelled, precertification).

B. *The Certification Team.* The district office manager will select a certification team consisting of at least one maintenance inspector, one avionics inspector, and one operations inspector.

(1) The person selected as Certification Project Manager (CPM) by the district office manager should have previous experience in certificating the same or similar-type operators. While experience as a principal inspector is desirable, the district office manager may appoint inspectors with less experience, depending on the situation.

(a) The Certification Project Manager works with the applicant.

- The Certification Project Manager schedules and conducts meetings, and coordinates correspondence with the applicant.

- If unable to attend a scheduled meeting, the Certification Project Manager shall appoint a team member to chair the meeting.

(b) The Certification Project Manager ensures that each certification task is completed in an acceptable and timely manner. All certification matters must be thoroughly coordinated with each team member.

(c) The Certification Project Manager should schedule periodic meetings with the certification team, unit supervisors, and/or the district office manager to ensure everyone concerned is fully informed of the current status of the certification. The Certification Project Manager must notify the unit supervisors and/or the district office manager of any information that may significantly affect or delay certification or that may attract media or political interest.

(2) Team members shall respond to requests for assistance from the Certification Project Manager. Additionally, team members shall keep the Certification Project Manager apprised of the status of the certification. Any discrepancy that may delay the certification effort must be brought to the attention of the Certification Project Manager immediately.

C. *Preapplication Meeting.* The preapplication meeting should provide the applicant with an overview of the certification process. At the preapplication meeting, the following should occur:

(1) The certification process should be explained to the applicant.

(2) The Certification Project Manager should use the Schedule of Events to facilitate discussion. These documents will help ensure all elements of the certification process are covered. The Schedule of Events lists items, activities, programs, aircraft, and/or facility acquisitions required for certification, along with the applicant's best estimate of the date the item will be acquired or ready for inspection. The Certification Project Manager shall ensure the applicant understands FAA needs in developing the schedule.

(a) The schedule must provide reasonable time for the FAA to review and accept or approve each item or event. In developing the Schedule of Events, certain events must occur before other activities. For example, airplanes must be brought under the applicant's control before conformity inspections are conducted.

(b) The number and types of events and activities that occur during certification vary according to the operation proposed. The Schedule of Events must include a complete listing of each document to be submitted, activity to be performed, and item to be inspected.

(c) The operator's failure to accomplish an item or event in a satisfactory or timely manner according to the Schedule of Events could delay certification. Also, if deficiencies are found in manuals or other documents, they must be returned for amendment or correction. This may delay final certification.

(d) If the applicant plans to petition for deviation, processing time must be considered when developing the Schedule of Events. FAR § 125.3 requires that a petition for deviation be submitted to AVS-1 at least 60 days before the date of intended operation.

(e) The Schedule of Events is intended to encourage an applicant to submit material well in advance of the date operations are proposed to begin. If, however, the application is submitted with only the minimum lead time required by regulation (for example, 60 days), complete documents, such as company maintenance manuals and policies and procedures manuals, may be required at the time of formal application.

(f) The inspector should remind the applicant to ensure that the Schedule of Events provides the information necessary for the team to know that the applicant is proceeding in an orderly manner.

(3) The applicant should be encouraged to ask questions about any part of the process that is unclear.

(4) The certification team should provide information concerning the form and content of the documents required for formal application.

NOTE: Inspectors should provide the applicant with guidance. However, it is important that each document, procedure, demonstration, or inspection reflects the applicant's knowledge, skills, and abilities. Therefore, inspectors must refrain from providing explicit instructions on how a task should be accomplished.

(a) *Formal application letter.* The formal application must be in the form of a letter and include the following information:

- A statement that it is a formal application for a FAR Part 125 operating certificate
- The applicant's mailing address and the physical location of its principal base of operations
- A list of flight crewmembers and the type of certificates held, including certificate number and ratings
- The names and titles of appropriate management personnel, such as the General Manager, Director of Operations, and the person responsible for scheduling inspections
- The names, titles, and signatures of persons authorized to initiate or respond to correspondence and sign operations specifications on behalf of the operator
- If a request for deviation from any requirement is anticipated, it should be noted in the initial compliance statement. The request and justification for the deviation must be made under separate cover and submitted to AVS-1 in accordance with FAR § 125.3.

NOTE: The Certification Project Manager may request a copy of the deviation request. However, only AVS-1 may issue a deviation from FAR Part 125. Therefore, inspectors shall refrain from discussing the merits of the deviation request with the applicant.

- The formal application letter must be signed by the owner, when applying as an individual; each partner, when applying as a partnership; or an authorized officer, when applying as an organization, such as a company or corporation. The date and state of incorporation must be shown, when applicable.

(b) *Initial compliance statement.* A compliance statement benefits both the applicant and the FAA by ensuring all applicable regulatory aspects are addressed during the certification process.

- The initial compliance statement shall be a complete list of all FAR Part 125 regulations. The list should refer to all subparts and each applicable section. The applicant must provide a brief narrative description or, preferably, a specific reference to a manual or other document describing the method of compliance. The applicant should note and explain any subparts or sections that do not apply.
- Specific regulations and subparts must be listed in the same numerical sequence as the regulations.
- Where compliance information has been developed, a manual reference or a description of the method of compliance must be entered next to the applicable regulatory section.
- If the method of compliance has not been fully developed, the applicant must submit a final compliance statement providing this information.
- When the method of compliance is formalized, a description can be added to the list in preparation for the final compliance statement.
- The Schedule of Events must show when the final compliance statement will be submitted.
- The final compliance statement must be reviewed and accepted before certain inspections and demonstrations can begin.

(c) *Policies and Procedures Manual.* This manual contains information about the applicant's organization, general policies and procedures, duties and responsibilities of personnel, and operational control procedures. The manual must comply with FAR § 125.71. It may be in the form of one or more manuals or sections of manuals. At the time of formal application, certain portions of the manual must be submitted. This allows the certification team to begin determining the applicant's ability to meet the certification requirements.

- The manual submitted at the time of formal application must show compliance with at least FAR § 125.73(a), (d) through (m), (o) through (q), and § 125.249(a)(1) and (b).
- Compliance with FAR §§ 125.73(b), (c), (n), and (r), and 125.249(a)(2) and (3) should be indicated on the schedule of events.

(d) *Management personnel.* The applicant must show sufficient management personnel to conduct operations safely and in accordance with the requirements of FAR Part 125. The policies and procedures manual required by FAR § 125.71 must accomplish the following:

- Set forth the duties, responsibilities, and authority of management personnel
- List the name and address of each person employed in a management position
- Designate persons responsible for scheduling inspections and for updating the approved weight and balance procedures on all airplanes operated by the applicant

9. FORMAL APPLICATION PHASE

A. *Beginning the Formal Application Phase.* The formal application phase begins when the applicant presents a formal request for certification to the FAA. The team ensures that each required document has been submitted. The team then reviews the formal application letter and Schedule of Events.

B. *Reviewing the Schedule of Events.* The Schedule of Events, when accepted, represents a commitment for both the applicant and the FAA. It sets dates for accomplishing or submitting the listed items. When reviewing the Schedule of Events, the team must carefully consider the feasibility of the proposed schedule with respect to logic of sequence, timeliness of events, completeness of events, and inspector availability.

(1) *Logic of sequence.* Many of the activities or events listed in the schedule must occur before other activities or events. For example, the aircraft conformity inspection must be completed before the emergency evacuation demonstration. The certification job aid should be used to ensure the sequence of events is logical. See Fig. 102-1.

(2) *Timeliness of events.* The Schedule of Events must be reasonable, realistic, and provide enough time for the team to review documents, manuals, and proposals.

(3) *Completeness of events.* The team must ensure the Schedule of Events is complete. Each required manual, document, event, and activity must be listed, along with the date the final compliance statement will be submitted.

(4) *Availability of personnel.* A major concern in meeting the Schedule of Events is the availability and capability of FAA personnel resources. The Certification Project Manager must determine that qualified inspectors are available or can be made available from other offices to assist the team in conducting an extensive manual review, consistent with the proposed Schedule of Events. The Certification Project Manager must determine the qualifications of the available inspectors. The Certification Project Manager also must determine if the certification project will require resources other than Flight Standards inspectors, such as Civil Aviation Security Inspectors, and the availability of those resources.

C. *Meeting with the Applicant.* At the discretion of the Certification Project Manager, the team may meet with the applicant to discuss the Schedule of Events or any other document submitted.

D. *Ending the Formal Application Phase.* The Formal Application Phase ends when the applicant has been notified, in writing, that the application is either accepted or rejected.

11. DOCUMENT COMPLIANCE PHASE

A. *Reviewing Documents.* In the Document Compliance Phase, the applicant's manuals and other documents are thoroughly reviewed and approved, accepted, or rejected. Each document must have an in depth review to be sure it complies with applicable regulations.

B. *Coordination.* The team must coordinate its efforts in reviewing manuals and other documents. The Schedule of Events determines the priority of items to be reviewed and shows if and when additional inspector support is needed.

C. *Deficient Documents.* If there are deficiencies in any document, team members should be ready to offer guidance but must avoid rewriting the applicant's documents.

D. *Concurrent Actions.* The Document Compliance Phase and the Demonstration Phase overlap in practice.

13. DEMONSTRATION AND INSPECTION PHASE. In this phase the team determines if the applicant's proposed procedures and programs are effective and whether facilities and equipment are satisfactory. Emphasis is on compliance with regulations and safe operating practices. Throughout this phase the Certification Project Manager must ensure that each aspect of the applicant's required demonstrations is observed and is accepted or rejected.

15. CERTIFICATION PHASE. An applicant is entitled to a certificate when the following criteria are met:

- The certification process is completed
- Each unsatisfactory item has been corrected
- It has been determined that the applicant is capable of complying with the Federal Aviation Regulations
- The applicant's ability to conduct operations in a safe manner has been demonstrated
- It is determined that the applicant has met all regulatory requirements and understands the conditions of the operating certificate

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites.* This task requires knowledge of the regulatory requirements of FAR Part 125.

B. *Coordination.* This task requires coordination with operations inspectors, maintenance inspectors, avionics inspectors, and regional Flight Standards division specialists.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- SFAR 38-2
- FAR Parts 25, 43, 45, 47, 65, 91, and 145
- 49 CFR Part 173, Shippers-General Requirements for Shipments and Packages
- 49 CFR Part 175, Carriage by Aircraft, if appropriate (hazardous materials)
- 49 CFR Part 830, Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail, Cargo, and Records (NTSB)
- Advisory Circular 20-42, Hand Fire Extinguishers for Use in Aircraft, as amended
- Advisory Circular 125-1, Operations of Large Airplanes Subject to FAR Part 125, as amended

B. *Forms*

- FAA Form 8400-6, Preapplication Statement of Intent
- FAA Form 8400-7, Operations Specifications
- FAA Form 8430-21, Operating Certificate

C. *Job Aids*

- Figure 102-1: Certification Job Aid
- Figure 102-2: Preapplication Statement of Intent
- Figure 102-3: Sample Operating Certificate

5. PREAPPLICATION PHASE. Figure 102-1, Certification Job Aid should be used in planning meetings, activities, and events associated with this task.

A. *Receive Initial Inquiry.* Before providing the potential applicant with a Preapplication Statement of Intent, determine if the proposed operation is applicable to FAR § 125.1.

(1) The applicant must have available a U.S.-registered civil aircraft with a seating configuration of 20 or more passengers or a maximum payload of 6,000 pounds or more.

NOTE: Temporary registration (pink copy) must be verified through the Aircraft Registry for proof of registration.

(2) The airplane must have an appropriate and current airworthiness certificate.

(3) *Limitations*

(a) An applicant operating airplanes under FAR Part 91 who is certificated to operate those airplanes under FAR Parts 121, 129, 135, or 137 is not eligible for a FAR Part 125 Operating Certificate.

(b) FAR § 125.11 prohibits the holder of an Air Carrier or Operating Certificate issued under FAR Parts 121, 129, or 135 from holding a FAR Part 125 operating certificate.

(c) An operating certificate may not be held jointly by two or more persons.

NOTE: A partnership is considered a single person even though it may consist of more than one person or corporation. For example, where both a parent and a subsidiary corporation exist, only one of the two corporations apply for any one certificate. That certificate cannot be issued to, or in the name of, both corporations. Regardless of common ownership, the parent and subsidiary corporation are considered by law as separate persons.

(d) A FAR Part 125 certificate holder is prohibited from conducting any operation which results directly or indirectly from any individual's holding out to the public to furnish transportation. Discuss this with the applicant and ensure there are no business agreements contrary to this restriction.

B. *If a Deviation Is Requested, Refer the Applicant to FAR § 125.3*

C. *Provide References to Applicant.* Encourage the applicant to obtain a copy of the appropriate, current regulations and revisions. Provide the applicant with the following:

- FAA Form 8400-6, Preapplication Statement of Intent (PASI)
- Advisory Circular 125-1, Operations of Large Airplanes Subject to FAR Part 125

D. *Process Preapplication Statement of Intent.* Within five working days of receipt of a signed Preapplication Statement of Intent, the district office manager shall ensure it is processed.

(1) Determine if information is complete, accurate, and acceptable (see Fig. 102-2).

(2) If unacceptable, note reasons in Section 2 of the Preapplication Statement of Intent. Notify the applicant of the discrepancies and state that a new Preapplication Statement of Intent is required.

(3) If acceptable, the district office manager shall determine if it is appropriate for the office to certificate the applicant and if necessary personnel are available.

(a) Obtain a precertification number from AVN-120.

NOTE: A final certificate number may be requested instead of a precertification number.

(b) Check the "Information only" block and enter the date the Preapplication Statement of Intent was sent to the region.

(c) Enter "Proceeding with formal certification" in the Remarks section and show the precertification or final certificate number.

(d) Send one copy of the Preapplication Statement of Intent to the Manager, Flight Standards Division. Retain the original in the district office.

E. *Select Certification Team*

F. *Schedule Preapplication Meeting.* Contact the applicant to arrange a preapplication meeting. Advise the applicant that key management personnel, as shown on the Preapplication Statement of Intent, should attend the meeting and be prepared to discuss, in general terms, specific aspects of the applicant's proposed operation. Use the certification job aid to plan and conduct the meeting.

G. *Conduct Preapplication Meeting*

(1) Review the Preapplication Statement of Intent with the applicant and verify that all information is current and correct. The applicant must note any changes on the Preapplication Statement of Intent.

(a) If there are changes that significantly affect the anticipated scope or type of operation, send a copy of the revised Preapplication Statement of Intent to the regional office.

(b) If the changes indicate the need to reassign certification responsibilities, the meeting should be terminated, and the following steps should be taken:

- Advise the applicant that notification of the new certificating office will be given

- Within five working days, send the revised Preapplication Statement of Intent to the regional office with a letter outlining the need to reassign certification responsibilities

- Within 10 working days of receipt of a request, the regional office shall assess the revised Preapplication Statement of Intent, reassign the certification project, and notify both the applicant and the newly assigned district office in writing

(2) Provide the applicant with an overview of the five-phase certification process described in this chapter.

(3) Advise the applicant of all applicable Federal Aviation Regulations. Recommend the applicant review them and any associated Advisory Circulars.

(4) Provide a package to the applicant consisting of at least the following:

- Advisory Circular 125-1

- The applicable certification job aid

- A sample of appropriate operations specifications (see Vol. II, Ch. 107)

- A sample Schedule of Events format

(5) Ensure the applicant understands the form and content of each document required for formal application. The formal application must consist of at least the following:

- A formal application letter

- A Schedule of Events

- An Initial Compliance Statement

- Policies and Procedures Manual

- Documentation that the applicant has or intends to acquire airplanes and facilities

- A copy of any deviation authority granted under FAR § 125.3

NOTE: Inform the applicant that while FAA inspectors may furnish informal guidance, it is solely the applicant's responsibility to produce acceptable documents and manuals.

(6) Advise the applicant that a formal application must be submitted at least 60 days before the proposed start-up date.

(7) Encourage the applicant to submit required items in draft form before the formal package is submitted and to notify the Certification Project Manager immediately of any problems or changes in the proposed operation.

H. *Conclude the Preapplication Meeting.* After discussing the certification process, regulatory requirements, and the formal application documents, verify that the applicant intends to continue the certification process. Advise the applicant to contact the Certification Project Manager regularly on the status of certification efforts. Inform the applicant that if there is no communication within any 60-day period after formal application, certification efforts will be terminated.

I. *When Required, Terminate the Certification Process.* The Certification Project Manager shall accomplish the following when notified by the applicant:

- Notify AVN-120 that the certification process is terminated, release the precertification number to the centralized certificate number data file, and indicate this action in Section 2 of the Preapplication Statement of Intent

- Return the Preapplication Statement of Intent to the applicant. Notify the applicant that the preapplication process is terminated and that a new Preapplication Statement of Intent is required to begin a new certification effort.

- Notify the regional office that the project is terminated

7. FORMAL APPLICATION PHASE

A. *Review Formal Application.* Determine that each item required for formal application has been submitted.

(1) If any required item is missing, reject the entire application and return it with a letter stating the reasons for rejection.

(2) Conduct an in depth review of the Schedule of Events.

B. *Conduct Formal Application Meeting.* The Certification Project Manager should conduct a formal application meeting when appropriate. Each member of the certification team should be present.

(1) Discuss each document and resolve each issue or deficiency.

(2) Review the upcoming certification process and discuss the impact on the applicant of not meeting the Schedule of Events.

(3) If any issue or deficiency cannot be resolved, the Certification Project Manager should end the meeting and inform the applicant that the formal application is not acceptable. The formal application must be returned to the applicant with a letter explaining the reasons for the rejection.

(4) Before concluding the meeting, the Certification Project Manager must ensure the applicant clearly understands the following:

- Written notification of acceptance or rejection of the application package will be sent within five working days after the meeting
- Accepting a formal application package does not mean acceptance or approval of the attachments. Each document shall be reviewed further and the applicant must take corrective action as required. Acceptance or approval of each attachment shall be indicated as the certification process continues.

C. *Accept or Reject the Formal Application Package.* Send the applicant a letter either accepting or rejecting the formal application package. If the package is rejected, return the application and attachments and indicate specific reasons for rejection.

NOTE: **Document thoroughly the reasons for rejection. Rejecting a formal application will be a sensitive issue since the applicant most likely will have expended considerable funds and resources. Therefore, the reasons must clearly indicate that to proceed with the certification process would not be productive.**

9. DOCUMENT COMPLIANCE PHASE

A. *Review Documents.* Ensure each document is complete and correct. Review documents by referencing the Federal Aviation Regulations, completed portions of the compliance statement, and the appropriate manual or document. The team shall evaluate the following documents:

- Policies and Procedures Manual
- Management Personnel Qualifications
- Minimum Equipment Lists, cockpit checklists, and aircraft performance documents
- Operations specifications
- Final compliance statement
- Noise emission control standard
- Weight and balance procedures
- Crewmember qualifications (operations inspectors)
- Inspection programs and maintenance procedures
- Documents showing the applicant has, or is acquiring, airplanes and appropriate facilities
- Any previously granted deviation
- Emergency evacuation demonstration plan, if applicable
- Any other appropriate document referenced in the operator's policies and procedures manual

B. *Obtain a Profile of the Applicant and Personnel from the Enforcement Information System (EIS) and the Accident/-Incident Data Subsystem (AIDS)*

NOTE: Enforcement Information System and Accident/-Incident Data Subsystem information is sensitive and must be kept confidential.

C. *Address Deficient Documents.* If deficiencies are found in any document, notify the applicant.

(1) If the deficiencies can be resolved informally (by phone or meeting), prepare a record showing the deficiencies and the corrective action agreed on. Provide a copy of the record to the applicant. When action is completed, note the

date on the office file copy and advise the applicant that the action is satisfactory.

(2) If significant revision is required, return the document to the applicant with a letter outlining the deficiencies. Address any impact on the Schedule of Events.

11. DEMONSTRATION AND INSPECTION PHASE

A. *Conduct Demonstrations and Inspections*

(1) Observe company and/or contract maintenance personnel performing scheduled and unscheduled aircraft maintenance and inspections.

NOTE: Since a FAR Part 125 applicant is not required to conduct proving flights, it may not be possible to observe maintenance and inspections being performed. If this occurs, the Schedule of Events must show that this item will be accomplished during post-certification surveillance. The applicant must advise the Principal Maintenance Inspector when and where maintenance and inspections will be performed.

(2) Review aircraft records. (See Vol. II, Ch. 111 and FAR §91.417 {old §91.173}.

(3) Inspect airplanes for conformity with appropriate type certificates and FAR Part 125.

(4) Inspect the airplanes for conformity with noise control standards.

(5) Evaluate principal maintenance base.

(6) Conduct an inspection of the principal operations base.

(7) Evaluate the applicant's ability to keep and maintain records and reports.

(8) Observe the applicant testing flight attendant crewmembers (operations inspectors).

(9) Conduct or observe pilot qualification functions (operations inspectors).

(10) Observe the applicant's emergency evacuation and/or ditching demonstration, if required.

(11) Evaluate other facilities, equipment, personnel, and operations determined necessary by the Certification Project Manager/team.

B. *Send Letter Listing Unacceptable Items, if Required.* If the applicant does not adequately demonstrate compliance or discrepancies cannot be resolved, forward a letter listing all unacceptable items to the applicant within 10 working days.

C. *Resolve Discrepancies.* After correcting all unacceptable items, the applicant must notify the Certification Project Manager in writing, detailing the corrective action taken.

D. *Issue Letters Showing Acceptance or Approval*

13. CERTIFICATION PHASE

A. *Prepare Operating Certificate.* When the applicant has met all regulatory requirements for certification, the Certification Project Manager must prepare FAA Form 8430-21.

(1) *Certificate holder's name.* Enter the certificate holder's full and legal name directly below the words "This certifies that".

(2) *Certificate holder's address.* Enter the address of the certificate holder's principal base of operations directly below the certificate holder's name. A post office box address is not acceptable unless it also reflects the physical location of the principal base of operations.

(3) *Certification Statement of Authority.* Do not modify the pre-printed certification statement of authority. Type "**Part 125 Operations**" in the space provided.

(4) *Certificate Number.* Obtain a final certificate number from AVN-120.

(5) *Effective Date.* The effective date shall be the date all requirements for certification were met. If amending a certificate to reflect an address change or a change of the assigned district office, show the date of original issuance on the new certificate.

(6) *Issued at.* Enter the four-character, alpha-numeric designator and city and state of the Certificate Holding District Office (for example, EA18, Richmond, VA).

(7) *Signature.* Operating certificates issued to air operators complying with FAR Part 125 shall be signed by the Certificate Holding District Office manager.

(8) *Signature, Title, and Region/Office.* Enter the full title of the district office manager in the space provided. Show the acronyms of the region and the Flight Standards District Office (FSDO) and number in the "region/office" space (for example, ASW-FSDO-18).

B. *Sign Operations Specifications.* Operations specifications must be signed and dated by the applicant and the appropriate principal inspectors. Give the original certificate and operations specifications to the new certificate holder.

C. *Prepare Certification Report.* Within 30 days after issuing the certificate, the Certification Project Manager shall ensure a certification report is prepared. This report must include the name and title of each inspector who assisted in the certification project and be signed by the Certification Project Manager. The report shall contain the following:

- A copy of the Preapplication Statement of Intent
- The certification job aid
- The letter of application
- The Schedule of Events
- The Final Compliance Statement
- The Emergency Evacuation Demonstration Evaluation
- A copy of the Operating Certificate issued
- A copy of all operations specifications issued
- A summary of any difficulty encountered during certification
- A copy of any partial deviation or waiver issued

D. *Distribute Certification Report*

(1) Retain the original certification report in the district office.

(2) Send one copy of the report to the regional office for information.

(3) If airplanes will be domiciled outside the certificating district office's jurisdiction, the principal inspectors may wish to provide any or all of the certification file to the appropriate district office.

E. *Establish an Official Office File.* The file shall contain at least the following:

- The certification report and attachments
- Approved minimum equipment lists, if applicable
- Surveillance reports in PTRS
- General correspondence relevant to the operator or agency
- Follow-on action requirements

15. TASK OUTCOMES

A. Completion of this task results in one of the following:

- Issuance of a certificate and operations specifications
- A letter to the applicant indicating the certificate is denied
- A letter to the applicant confirming termination of the certification process by the applicant

B. Complete a PTRS Transmittal form.

17. FUTURE ACTIVITIES

A. *Transition.* The district office manager must ensure there is an orderly transition from the certification process to certificate management, as appropriate.

B. *Post-certification Program.* Assigned inspectors should carefully observe the operator during the first 90 days. Additional inspections may be necessary to determine operating practices are performed at an adequate level of safety. Direct particular attention to areas which may not have been demonstrated or observed during certification, such as cargo and passenger loading, and scheduled and unscheduled maintenance and inspections.

CHAPTER 111 EVALUATE FAR PART 125 OPERATOR'S MAINTENANCE RECORDS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3634

B. *Avionics*: 5634

3. OBJECTIVE. This chapter describes the process used to evaluate an applicant's procedures for utilizing, preserving, and retrieving the maintenance records required by FAR Part 125.

5. GENERAL. To comply with the maintenance recording requirements of the Federal Aviation Regulations, the applicant's company manual, as defined in FAR §§ 125.71, 125.75, and 125.249, must identify and contain procedures to complete all applicable documents as specified in FAR Parts 91 and 125.

A. *Current Airworthiness Directive Status.* The applicant must keep a record showing the current status of applicable Airworthiness Directives, including the method of compliance.

(1) This record must include the following:

- List of Airworthiness Directives with revision dates applicable to the type of airplane
- The method of compliance
- The time in service, or the cycles, and/or the calendar date when the next action is required for a recurring Airworthiness Directive

(2) An acceptable method of compliance should include a reference to one of the following:

- A specific portion of the Airworthiness Directive
- A manufacturer's service bulletin, if the bulletin is referenced in the Airworthiness Directive
- Another document generated by the person performing the maintenance that shows compliance with the Airworthiness Directive, such as an Engineering Order (EO) or Engineering Authorization (EA)

NOTE: Alternative methods of compliance must be approved by the appropriate FAA Engineering Directorate and will apply only to the applicant making the application.

(3) The document that contains the current status of Airworthiness Directives/method of compliance may be the same as the record of Airworthiness Directive accomplishment. Both the record of Airworthiness Directive accomplishment and the record of Airworthiness Directive method of compliance must be retained with the airplane records.

B. *Total Time in Service Records*

(1) FAR Part 125, through the applicable requirements of FAR Part 91, requires the total time in service records for airframes, engines, and when applicable, propellers. Total time in service records may consist of the following:

- Airplane maintenance record pages
- Designated cards or pages
- A computer listing
- Other methods as described in the applicant's company manual

(2) Required total time in service records must be retained with the airplane records. If the airplane is sold, the records must be transferred to the purchaser.

C. *Life Limited Parts Status Records.* Records must be kept for components of the airframe, engine, propellers, and appliances that are identified to be removed from service when their life limit has been reached.

(1) The current life limited status of the part is a record indicating the life limit remaining before the required retirement time of the component is reached. This record must include any modification of the part as directed by Airworthiness Directives, service bulletins, or manufacturer/applicant initiated product improvements.

(2) The following are not considered a current life limited status record:

- Work orders
- Maintenance installation records
- Purchase requests
- Sales receipts
- Manufacturer's documentation of original certification
- Other historical data

(3) Whenever the current status of life limited parts records cannot be established and the historical records are not available, the airworthiness of that product cannot be determined and it must be removed from service.

(4) Current status of life limited parts records must be retained with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

D. *Airworthiness Release/Approval for Return to Service.* After performance of maintenance, preventive maintenance, or alterations on an airplane, an airworthiness release or an approval for return to service must be completed before the airplane is operated.

(1) Using the procedures described in the company manual, the applicant must be able to retain all the records necessary to show that all requirements for approving the airplane for return to service have been met.

(2) As applicable, the applicant must identify the following:

- Those persons authorized to perform inspections
- Those persons authorized to sign an airworthiness release

(3) These personnel must be appropriately certificated as required by FAR Part 43.

E. *Overhaul Records*

(1) A record must be made whenever an item of airplane equipment is overhauled and must include the following:

- A description of the work performed or reference to data acceptable to the Administrator
- The name of the person performing the work
- The date of completion of the work performed
- The signature and certificate number of the individual approving the airplane for return to service

NOTE: A return to service tag does not constitute an overhaul record, although it may be used to reference the overhaul records.

(2) The owner must retain the record and be able to make it available to the Administrator upon demand. The overhaul records must be retained until the work is repeated or superseded by work of equal scope and detail.

F. *Current Airplane Inspection Status.* The applicant must retain a record identifying the current inspection status of each airplane.

(1) This record shall show the time in service since the last inspection required by the inspection program under which the airplane, engines, emergency equipment, propellers, and appliances are maintained.

(2) Records of inspection work packages or routine and non-routine items generated while performing any part of the inspection program must be retained until the work is repeated or superseded by work of equal scope and detail.

G. *Major Repair and Major Alteration Records.* Applicants must retain the records for each major repair/-alteration made to an aircraft, including work done on the following:

- Airframe
- Engine
- Propeller
- Appliance

(1) Major repair records must be retained until the work is repeated or superseded by other work, or for one year after the work is accomplished.

(2) Major alteration records must be retained with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 91 and 125
- Successful completion of the Airworthiness Inspectors Indoctrination String Course or equivalent

B. *Coordination.* This task requires coordination with the applicant and may require regional coordination.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 43, 65, and 145
- Applicant's Company Manual

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review The Applicant's Maintenance Manual Recordkeeping Procedures*

(1) Ensure that procedures exist in the applicant's manual that create a suitable system for initiating, preserving, and retrieving the required records.

(2) Ensure that all records will contain the following information, as applicable:

- Description of the work performed (or reference to data acceptable to the Administrator)
- The name of the person performing the work with that person's certificate type and number
- The name of the person approving the work with that person's certificate type and number

B. *Review the Applicant's Recordkeeping System.* Review the applicant's recordkeeping system to ensure that the requirements of FAR Parts 91 and 125 will be met for the following:

(1) *Airworthiness releases/approval for return to service records.* Ensure the following:

(a) Record requirements of FAR § 125.411 will be met

(b) Approval for return to service records will be retained for one year after the work is performed or until repeated or superseded by other work

(c) Airworthiness releases will be retained for at least 60 days

(2) *Total time in service records*

(a) Evaluate the method of recording total time in service of the airframe, engine, and propeller.

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(3) *Life Limited Parts Status*

(a) Ensure that the applicant has procedures for tracking the current status of life limited parts for each airframe, engine, propeller, and appliance, to include the following information:

- Total operating hours (including calendar time)/cycles accumulated
- Life limit (total service life)
- Remaining time/cycles
- Modifications

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(4) *Time Since Last Overhaul Records.* Ensure that procedures exist for updating this document from the overhaul records and for ensuring that this document accompanies the airplane upon sale.

(5) *Overhaul Records*

(a) Ensure that the manual describes how the applicant will document the last complete overhaul of each airframe, engine, propeller, and appliance. The overhaul record should include the following information:

- Disassembly data
- Dimensional check data
- Replacement parts list
- Repair data
- Reassembly/test data
- Reference to data including overhaul specifications

(b) Ensure that these records will be retained until the work is repeated or superseded by work of equivalent scope and detail.

(6) *Current Airplane Inspection Status*

(a) Evaluate the method the applicant will use to record the time in service since the last inspection.

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(7) *Airworthiness Directive Compliance.* Evaluate how the applicant will comply with the recordkeeping requirements of the Airworthiness Directives, including emergency Airworthiness Directives. The procedures must generate a record that contains the following data:

(a) *Current status.* Ensure that the current status data will include the following:

- A complete list of Airworthiness Directives applicable to the airplane
- The date and time of compliance
- The time and/or date of the next required action (if a recurring Airworthiness Directive)

(b) *Method of compliance.* Ensure that this data will include either a record of the work performed or a refer-

(b) Approval for return to service records will be retained for one year after the work is performed or until repeated or superseded by other work

(c) Airworthiness releases will be retained for at least 60 days

(2) *Total time in service records*

(a) Evaluate the method of recording total time in service of the airframe, engine, and propeller.

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(3) *Life Limited Parts Status*

(a) Ensure that the applicant has procedures for tracking the current status of life limited parts for each airframe, engine, propeller, and appliance, to include the following information:

- Total operating hours (including calendar time)/cycles accumulated
- Life limit (total service life)
- Remaining time/cycles
- Modifications

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(4) *Time Since Last Overhaul Records.* Ensure that procedures exist for updating this document from the overhaul records and for ensuring that this document accompanies the airplane upon sale.

(5) *Overhaul Records*

(a) Ensure that the manual describes how the applicant will document the last complete overhaul of each airframe, engine, propeller, and appliance. The overhaul record should include the following information:

- Disassembly data
- Dimensional check data
- Replacement parts list
- Repair data
- Reassembly/test data
- Reference to data including overhaul specifications

(b) Ensure that these records will be retained until the work is repeated or superseded by work of equivalent scope and detail.

(6) *Current Airplane Inspection Status*

(a) Evaluate the method the applicant will use to record the time in service since the last inspection.

(b) Ensure that procedures are in place to retain the records with the airplane indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(7) *Airworthiness Directive Compliance.* Evaluate how the applicant will comply with the recordkeeping requirements of the Airworthiness Directives, including emergency Airworthiness Directives. The procedures must generate a record that contains the following data:

(a) *Current status.* Ensure that the current status data will include the following:

- A complete list of Airworthiness Directives applicable to the airplane
- The date and time of compliance
- The time and/or date of the next required action (if a recurring Airworthiness Directive)

(b) *Method of compliance.* Ensure that this data will include either a record of the work performed or a refer-

CHAPTER 147 EVALUATE FAR PART 137 OPERATOR

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3202

B. *Avionics:* 5202

3. OBJECTIVE. This chapter describes procedures to evaluate an applicant for a FAR Part 137 certificate.

5. GENERAL

A. The certification process provides for interaction between the applicant and the FAA, from initial inquiry to certificate issuance or denial. It ensures programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested.

(1) The certification process consists of five phases, as follows:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

(2) Due to the nature of FAR Part 137 operations, the way the five phases are used will depend on the size and complexity of the proposed operation. Inspectors may find that some of the phases overlap. For example, an inspector may review documents from the Document Compliance Phase prior to the meeting held during the Formal Application Phase.

B. *The Certification Team.* The district office has the responsibility of appointing a certification team. The size of the certification team will depend on the complexity of the proposed operation. The team should consist of at least one operations and one maintenance inspector. An avionics inspector also may be required. A member of the team will be designated as Certification Project Manager.

C. The Certification Project Manager (CPM) shall closely coordinate all activities with the appropriate specialty.

D. *Eligibility Requirements.* FAR Part 137 authorizes both private and commercial agricultural aircraft operations.

(1) The private agricultural aircraft operator may not conduct operations over property unless the operator is the owner or lessee of the property or has ownership or other legal interest in the crops located on the property. In addition, the operator may not conduct operations over a congested area or for compensation or hire. These conditions do not limit commercial agricultural aircraft operators.

(2) The private operator/applicant must hold either a private, commercial, or airline transport pilot certificate with appropriate ratings.

(3) The commercial operator/applicant must have available the services of a pilot having a current commercial or airline transport pilot certificate with appropriate ratings.

(4) The applicant for either a private or commercial agricultural aircraft operator certificate must provide at least one properly certificated airworthy aircraft equipped for agricultural operations.

(5) The applicant for a commercial operator certificate must have the services of a chief supervisor of agricultural operations. This supervisor should possess the appropriate knowledge and skills.

E. *Deviations and Waivers*

(1) Public aircraft used to conduct agricultural operations need not comply with the certification rules of FAR Part 137 but must comply with the operating rules of FAR Part 137.

(2) A rotorcraft equipped for agricultural operations under a FAR Part 133 certificate only is limited to the dispensing of water on forest fires.

(3) The following are examples of deviations to FAR Part 137 applicability that require authorizations:

- Operations within a control zone
- Operations below Visual Flight Rule minimums
- Operations over congested areas

7. PREAPPLICATION PHASE. The applicant will submit a letter of intent, outlining the proposed operation. If the applicant requires information about the application or needs additional guidance, the Certification Project Manager has the option of conducting a preapplication meeting.

9. FORMAL APPLICATION PHASE. The Formal Application Phase begins when the team receives the application and/or letter of intent. The entire team then meets with the applicant. Any questions that arise at this time should be resolved.

11. DOCUMENT COMPLIANCE PHASE. During this phase, the application and all other submitted material will be reviewed.

13. DEMONSTRATION AND INSPECTION PHASE. During this phase, the applicant will demonstrate the ability to comply with the Federal Aviation Regulations and safe operating practices.

A. *Records*

(1) Commercial agricultural aircraft operators must have a system for maintaining a current list of customers and services provided. This system must include a method of retaining these records.

(2) The FAA does not require private agricultural aircraft operators to maintain comparable records detailing their agricultural dispensing operations.

B. *Aircraft.* The maintenance inspector(s) will conduct the inspection of aircraft records, the aircraft, and dispensing equipment for both commercial and private agricultural aircraft operators.

NOTE: When inspecting previously used dispensing equipment, caution should be used in order to prevent contamination from hazardous/toxic materials.

C. *Base Inspections.* The size and complexity of the operation will determine the extent of the inspection required at an operator's base.

D. Unless previously demonstrated, the applicant or designated chief supervisor must show satisfactory knowledge and skills regarding agricultural aircraft operations.

15. THE CERTIFICATION PHASE. If certification requirements are met and the certificate is to be issued, the air operator certificate number must be obtained from AVN-120.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 137
- Successful completion of the General Aviation, Airworthiness, or Operations Indoctrination Course
- Knowledge of and associated experience with FAR Part 137 operations

B. *Coordination.* This task requires close coordination between the Airworthiness and Operations Inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 1, 43, 61, and 91
- Order 8300.10, Airworthiness Inspector's Handbook, Vol. II, Ch. 221, and Vol. III, Ch. 27
- Advisory Circular 137-1, Agricultural Aircraft Operations, as amended

B. *Forms*

- FAA Form 8710-3, Application for Agricultural Aircraft Operator Certificate (Figure 147-1)
- FAA Form 8430-21, Operating Certificate

C. *Job Aids.* None.

5. PREAPPLICATION PHASE

A. *Provide Applicant With Necessary Information and Application Form.* Advise the applicant to submit a letter of intent. Advise the applicant to assure compliance with any other applicable Federal, state, and/or local aerial application regulations.

B. *Schedule Preapplication Meeting, if Necessary*

C. *Obtain a Precertification Number from AVN-120, if Required*

7. FORMAL APPLICATION PHASE

A. *Accept Application and Review Letter of Intent.* The letter of intent should include the following information:

- Specific type of agricultural aircraft operator certificate for which applicant is applying (commercial or private)
- Company legal name and appropriate company business names (d/b/a's), principal operation base address, primary airport address, mailing address (if applicable), and telephone numbers
- Type of aircraft to be operated
- Type of materials to be dispensed
- Estimated date when operations or services will begin
- Names and addresses of any management personnel or chief supervisor

B. *Conduct Formal Meeting, as Appropriate*

C. *Schedule Inspections*

9. DOCUMENT COMPLIANCE PHASE. Review the application and associated documents to ensure the information is complete and correct.

11. DEMONSTRATION AND INSPECTION PHASE

A. *Conduct Knowledge and Skill Tests, as Required*

B. *Inspect Commercial Applicant's Record System*

C. *Inspect Aircraft.* Inspect the aircraft and the aircraft maintenance records to ensure the following:

- Aircraft are properly certificated and airworthy
- Inspection status is current
- Aircraft are appropriately equipped for agricultural operations
- Aircraft are in condition for safe operation

D. *Conduct a Facility Inspection, as Appropriate.* (See Vol. II, Ch. 221)

E. *Analyze Findings.* Conduct a debriefing with the certification team to analyze the findings.

F. *Debrief Applicant.* Conduct a meeting with the applicant and resolve any deficiencies.

13. CERTIFICATION PHASE

A. *Prepare Operating Certificate.* When the applicant has met all regulatory requirements for certification, the Certification Project Manager must prepare FAA Form 8430-21, Operating Certificate, as follows:

(1) *Certificate holder's name.* Enter the certificate holder's full and legal name directly below the words "This certifies that". Other names, such as "doing business as", shall not be shown on the certificate.

(2) *Certificate holder's address.* Enter the address of the certificate holder's principal base of operations directly below the certificate holder's name. A post office box address is unacceptable unless it also reflects the physical location of the principal base of operations.

(3) *Certification Statement of Authority.* Specify "commercial" or "private" agricultural aircraft operations.

(4) *Certificate Number.* Obtain a certificate number from AVN-120.

(5) *Effective Date.* The effective date shall be the date all requirements for certification are met. If amending a certificate to reflect an address change or a change of the assigned district office, show the date of original issuance on the new certificate.

(6) *Issued at.* Enter the four-character, alpha-numeric designator, city, and state of the Certificate Holding District Office.

(7) *Signature, Title, and Certificate Holding District Office Designation.* The Certificate Holding District Office manager or designee shall sign operating certificates issued to operators complying with FAR Part 137. Enter the full title of the person signing the certificate in the space provided. Show the designations of the region and the Flight Standards District Office (FSDO).

B. *Ensure Certification Report Is Prepared.* This report establishes the district office file and must include the name and title of each inspector who assisted in the certification project. The report must be signed by the Certification Project Manager. The report shall contain the following:

- A copy of the letter of intent
- The certification job aid
- The application
- Schedule of events
- A copy of the Operating Certificate
- A summary of any difficulties encountered during the certification process, including a description of corrective actions
- A copy of any authorization for deviation or waiver issued

15. TASK OUTCOMES

A. *File a PTRS Transmittal Form*

B. Completion of this task will result in one of the following:

(1) Issuance of a certificate

(2) A letter to the applicant indicating the certificate is denied

(3) A letter to the applicant confirming termination of the certification process by the applicant

C. *Distribute Certification Report*

(1) Retain the original certification report and all supporting documents in the operator/applicant's district office file.

(2) Send one copy of the report to the regional office for information.

(3) If aircraft will be domiciled outside the Certificating District Office's geographical area of responsibility, the principal inspectors may wish to provide any or all of the certification file to the appropriate district office.

17. FUTURE ACTIVITIES

A. *Transition.* The district office manager must ensure there is an orderly transition from the certification process to certificate management.

B. *Post-certification Program.* Assigned inspectors should carefully observe the operator during the first 90 days of operation. Additional inspections may be necessary to determine operating practices are performed at an adequate level of safety. Direct particular attention to areas that may not have been demonstrated or observed during certification.

CHAPTER 156 EVALUATE FAR PART 141 PILOT SCHOOL

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3230

B. *Avionics:* 5230

3. OBJECTIVE. This chapter describes how to evaluate an applicant for a FAR Part 141 pilot school certificate.

5. GENERAL

A. The certification process provides for interaction between the applicant and the FAA, from initial inquiry to certificate issuance or denial. It ensures programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested.

(1) The certification process consists of five phases, as follows:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

(2) Due to the nature of FAR Part 141 operations, the way the five phases are used will depend on the size and complexity of the proposed operation. The five phases may overlap. For example, an inspector might review documents during the Document Compliance Phase prior to attending the meeting in the Formal Application Phase.

B. The Certification Project Manager (CPM) shall closely coordinate all activities with the appropriate specialties.

C. *Importance of Maintaining Training Aircraft.* Training aircraft are subject to greater wear and deterioration because of the frequent takeoffs and landings. Malfunctions that may be controlled by an experienced pilot could place the relatively inexperienced student pilot in a critical situation. This is particularly true in complex aircraft with controllable propellers and retractable gear. The frequency of takeoffs and landings on a training aircraft can make engines vulnerable to overheating and rapid cooling damage.

A. *Application of Systems Analysis Processes.* Experience has shown that safety is enhanced when operators employ systems analysis concepts. Inspectors should encourage operators to develop and use systems to control the maintenance of school aircraft.

(1) Inspectors should suggest that operators do the following:

- Clearly define the management organization
- Establish a well-defined chain of command
- Provide individual job descriptions explaining the scope and detail of authority and responsibility
- Provide specific instructions regarding the accomplishment of jobs

(2) Inspectors should encourage pilot schools to define the following:

- The control and schedule of aircraft for required inspection(s) and maintenance
- The scope and detail of the maintenance inspections
- The correction and recording in aircraft records of pilot-recorded discrepancies
- The maintenance of aircraft operated under lease agreements

B. *Contract Maintenance.* Maintenance may be accomplished under contract arrangement, providing sufficient certificated mechanics are readily available to maintain the school's aircraft. Arrangements for maintenance by other than school-operated facilities and personnel should be described in a written statement.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 141
- Familiarity with the type equipment to be used by applicant
- Completion of the Airworthiness Inspectors' Indoctrination Course

B. *Coordination.* This task will require coordination with maintenance, avionics, and operations inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 43, 45, 47, 65, 91, 133, and 137
- Order 8300.10, Airworthiness Inspectors' Handbook, Vol. III, Chs. 26 and 27

B. *Forms*

- FAA Form 8420-8, Application for Pilot School Certificate
- FAA Form 8000-4, Air Agency Certificate

C. *Job Aids.* None.

5. PREAPPLICATION PHASE

A. *Provide the Applicant with Necessary Information and an Application Form.* Advise the applicant to submit a letter of intent.

B. *Schedule a Preapplication Meeting, If Necessary*

7. FORMAL APPLICATION PHASE. Following submission of the application form and letter of intent, discuss with the applicant any obvious deficiencies in the application and suggest corrective actions.

9. DOCUMENT COMPLIANCE PHASE. Review the application, letter of intent, and any relevant attachments in detail for completeness and accuracy. If necessary, meet with the applicant to resolve deficiencies and answer questions.

11. DEMONSTRATION AND INSPECTION PHASE

A. *Review General Aviation Alerts.* Review for trends and problem areas regarding the make(s) and model(s) of aircraft the operator intends to use.

B. *Inspect Aircraft.* Inspect aircraft for certification, registration, airworthiness, and condition for safe operations. Ensure the operator has available aircraft equipped to perform functions appropriate for the course of training.

(1) Inspect special purpose equipment installed on aircraft, such as external load equipment, agricultural dispensing equipment, and modifications for handicapped students, for approved data.

(2) Ensure the aircraft and the equipment list agree.

(3) Ensure that the installed equipment to be used for radio navigation and instrument training is operational and complies with the minimum requirements.

C. *Inspect Aircraft Maintenance Records*

(1) Inspect aircraft maintenance and alteration records to determine that all aircraft have current, appropriate inspections and meet all of the Federal Aviation Regulations requirements. Ensure compliance with all applicable Airworthiness Directives and life-limited parts requirements.

(2) Ensure that current weight and balance information is available to the pilot of the aircraft.

D. *Ensure Adequate Personnel, Facilities, and Equipment.* Discuss with the applicant the advisability of having properly certificated and trained personnel to maintain the aircraft. Verify that any contract maintenance agreements are described in writing and provide for a sufficient number of certificated mechanics readily available to maintain the school's aircraft. Ensure the applicant has access to facilities and equipment adequate to maintain the school's aircraft.

E. *Analyze Findings.* Discuss with the Certification Project Manager any deficiencies or problem areas found.

13. CERTIFICATION PHASE. When the applicant has met all regulatory requirements for certification, the Certification Project Manager must prepare FAA Form 8000-4, Air Agency Certificate.

15. TASK OUTCOMES

A. If the applicant terminates or fails to complete the certification process, a letter should be sent to the applicant confirming this action. All documentation furnished by the applicant shall be returned.

B. Completion of this task will result in one of the following:

(1) Issuance of a certificate

(2) A letter to the applicant indicating the certificate is denied

C. *Establish an Office File.* The Certification Project Manager will establish a district office file to contain all documents associated with the certification process.

D. *File a PTRS Transmittal Form*

17. FUTURE ACTIVITIES

A. *Transition.* The district office manager must ensure there is an orderly transition from the certification process to certificate management.

B. *Post-certification Program.* Carefully observe the operator during the first 90 days. Additional inspections may be necessary to determine operating practices are performed at an adequate level of safety. Direct particular attention to areas that may not have been demonstrated or observed during certification.

CHAPTER 163 CERTIFICATE FAR PART 145 FOREIGN REPAIR STATION/ADDED RATING

Section 1 Background

1. **PTRS ACTIVITY CODES**

A. *Maintenance:* 3230

B. *Avionics:* 5230

3. **OBJECTIVE.** This chapter describes the process used to evaluate an applicant for certification of a foreign repair station or added rating.

5. **THE CERTIFICATION PROCESS.** The certification process provides for interaction between the applicant and the FAA from initial inquiry to certificate issuance or denial. It ensures programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification process consists of five phases:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

NOTE: For the purposes of this chapter, "district office" refers to the office performing the certification, to include International Field Offices, as applicable.

A. *Preapplication Phase*

(1) *Preapplication Statement of Intent (PASI) FAA Form 8400-6*

(a) The PASI will be used by the Manager, Flight Standards Division or designee to evaluate the complexity of the proposed operation. This allows the establishment of the certification team to be based on the complexity of the certification. A Certification Project Manager (CPM) will be designated as the principal spokesperson for the FAA during certification.

(b) An applicant should conduct a thorough review of the appropriate regulations and advisory material to provide guidance for personnel, facility, equipment, and documentation requirements. As a result of this review, the applicant must address, in the PASI, how these requirements will be met.

NOTE: Submittal of the PASI by the applicant shows an intent to initiate the certification process.

(2) *Preapplication Meeting.* The preapplication meeting should be held in the district office. This will allow the applicant to become familiar with the FAA personnel with whom they will be working.

(3) *Application for Repair Station Certificate and/or Rating, FAA Form 8310-3.* During the preapplication meeting the applicant should be instructed on how to complete the application.

(4) *Formal application attachments.* During the preapplication meeting requirements for the application attachments should be discussed. This discussion should include the following:

(a) *Inspection Procedures Manual.* The applicant should be encouraged to use Advisory Circular 145-3, Guide for Developing and Evaluating Repair Station Inspection Procedures Manuals, as amended, for guidance in developing the manual. The manual should allow the user to understand its content without further explanation and must not contradict any regulatory requirements.

NOTE: It is the applicant's responsibility to develop manuals and procedures that ensure safe operating practices and compliance with the rules. The team can offer suggestions for improvement but must not "write" the material.

(b) *Compliance statement.* The compliance statement will ensure that all applicable regulatory requirements are addressed during the certification process. This is done by listing each applicable FAR Part 145 section with a brief narrative or specific reference to a manual/document that describes how the applicant will comply with the regulation.

NOTE: If the Inspection Procedures manual references sections of the applicant's existing company Quality Control manual there must be a corresponding cross reference list. This list references the FAR sections to corresponding manual pages and can be used in place of a compliance statement.

(c) *Additional certification information and data requirements.* The foreign repair station must submit the following additional information and data for original certification:

- A letter stating the reasons for requesting foreign repair station certification
- Two copies of a suitably bound brochure including all of the requirements listed in FAR § 145.11
- Evidence that the prescribed fees, per FAR Part 187 Appendix A, have been paid
- If available, a copy of the repair station certificate issued by the country where the station is located

(d) *Additional certification renewal information and data requirements.* The foreign repair station, when applying to the district office, must submit the following additional information and data for certificate renewal:

- Records of work on U.S. aircraft/components since last certificate was issued
- Evidence that the prescribed fees, per FAR Part 187 Appendix A, have been paid

(5) *Personnel certificate requirements*

(a) Personnel requirements for foreign repair stations differ from domestic requirements in that airman certificates are not required for supervisory or inspection positions.

(b) If no certificate is held from either the U.S. or the country where the station is located, the determination of performance qualifications is made by using oral or practical tests, or any method acceptable to the Administrator.

(6) *Supervisory and final inspection personnel requirements.* Personnel qualifications for supervisory and final inspection personnel include the following:

(a) The ability to understand the following:

- Applicable FAA regulatory requirements
- FAA Airworthiness Directives
- Maintenance and service instructions for the items to be worked on
- U.S. type certificate data sheets

(b) The ability to read, write, and understand English

B. *Formal Application Phase.* To begin the Formal Application Phase the team will receive the application, and attachments. As a rule, the team will meet with the applicant after receiving the formal application package. All questions about the proposed operation, the formal application, and attachments should be resolved at this time. The meeting should consist of the certification team members and all key management personnel from the applicant's organization.

C. *Document Compliance Phase.* In this phase, the application is thoroughly reviewed for approval or disapproval and the manual and related attachments are reviewed for acceptance or rejection. This review ensures both conformity to the applicable regulations and safe operating practices. This phase is done in the district office by the certification team.

D. *Demonstration and Inspection Phase.* In this phase the certification team ensures that the applicant's proposed procedures are effective and that facilities and equipment meet regulatory requirements. The Certification Project Manager must decide if demonstrations will be required.

E. *Certification Phase*

(1) Once the applicant meets the regulatory requirements of FAR Part 145, the certification team will issue the repair station certificate and operations specifications with the appropriate ratings.

(2) *Certificate Durations.* Foreign repair station certificates expire 12 months after initial certification. A certificate can be renewed for up to 24 months if:

FIGURE 220-1
MSG 2 DECISION DIAGRAM

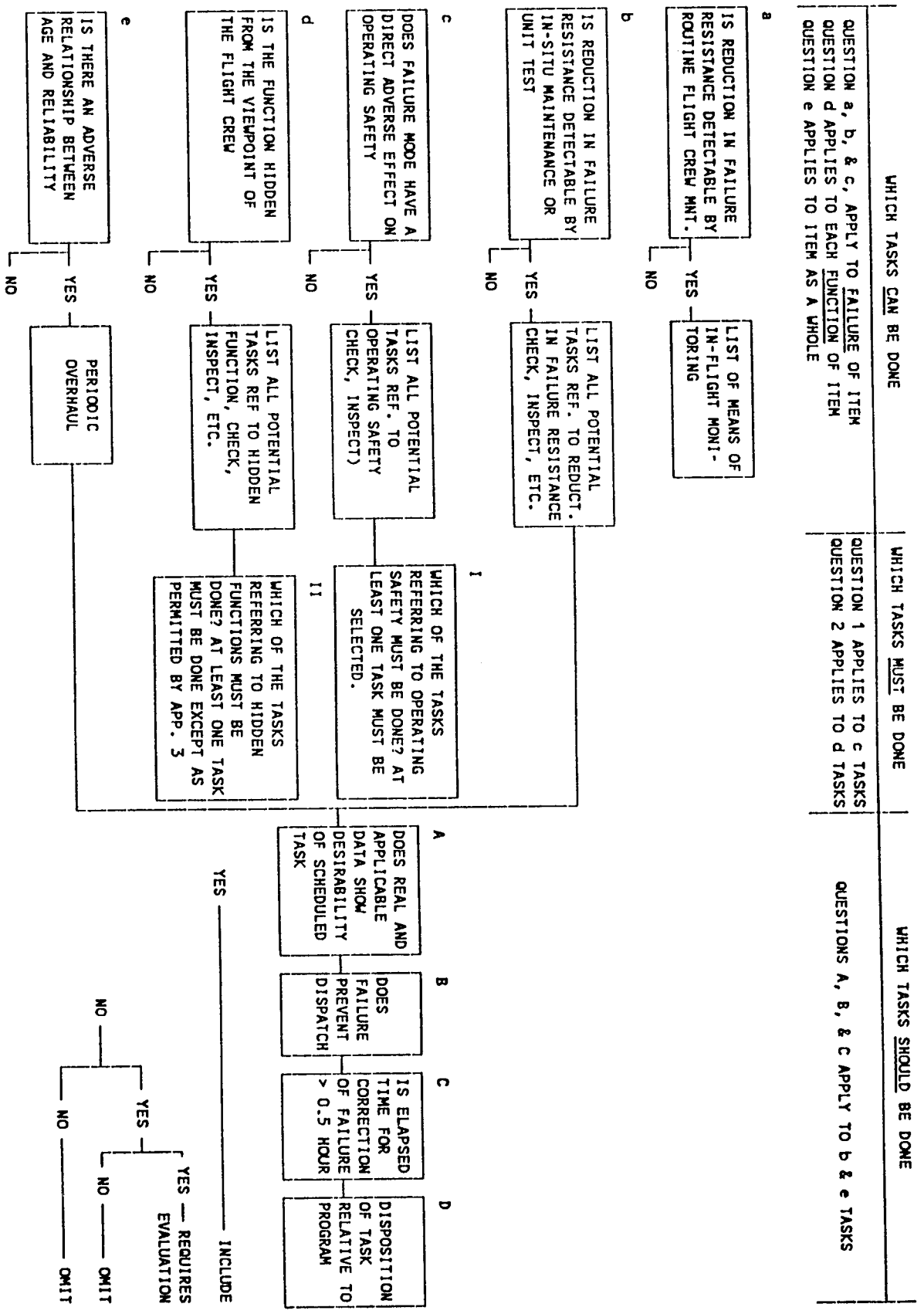

FIGURE 220-2
STRUCTURE ANALYSIS METHOD

	1	2	3	4	
FATIGUE RESISTANCE	AN INDICATION OF THE FATIGUE RESISTANCE OF THE ITEM RELATIVE TO THE FATIGUE DESIGN GOAL FOR THE OVERALL AIRCRAFT				
	SMALL MARGIN ABOVE DESIGN GOAL	FAIR MARGIN ABOVE DESIGN GOAL	CONSIDERABLE MARGIN ABOVE DESIGN GOAL	HIGH MARGIN ABOVE DESIGN GOAL	
CORROSION RESISTANCE (INCLUDING STRESS CORROSION)	AN INDICATION OF THE RELATIVE CORROSION RESISTANCE OF THE ITEM. CONSIDERING BOTH EXPOSURE AND PROTECTION.				
	LEAST MARGIN OF RESISTANCE	FAIR MARGIN OF RESISTANCE	CONSIDERABLE MARGIN OF RESISTANCE	HIGHEST MARGIN OF RESISTANCE	
CRACK PROPAGATION RESISTANCE	AN INDICATION OF THE RELATIVE ABILITY OF THE MATERIAL USED TO RESIST PROPAGATION OF CRACKS.				THIS PORTION OF CHART TO BE EXECUTED FOR EACH ITEM WHICH HAS BEEN DESIGNATED AS "STRUCTURALLY SIGNIFICANT"
	LEAST MARGIN OF RESISTANCE (HI HEAT TREAT STEEL)	FAIR MARGIN OF RESISTANCE (7000 SERIES ALUM)	CONSIDERABLE MARGIN OF RESISTANCE (TITANIUM)	HIGHEST MARGIN OF RESISTANCE (2000 SERIES ALUM)	
DEGREE OF REDUNDANCY	AN INDICATION OF THE DEGREE TO WHICH THE ITEM IS BACKED UP BY REDUNDANT STRUCTURE.				
	SMALL			HIGH	
FATIGUE TEST RATING	WILL THE LOADS APPLIED TO THE ITEM IN THE FULL SCALE FATIGUE TEST PROPERLY REPRESENT LOADS PREDICTED FOR SERVICE USAGE.				
	NO			YES	
OVERALL RATING NUMBER (R)	A RATING WHICH CONSIDERS ALL THE ABOVE RATINGS AND COMBINES THEM BY JUDGEMENT INTO A SINGLE OVERALL RATING WHICH REPRESENTS A RELATIVE LEVEL OF THE STRUCTURAL INTEGRITY OF THE ITEM				THIS RATING NO. IS ASSIGNED TO ALL OTHER PRIMARY AND SECONDARY STRUCTURE WHICH IS NOT STRUCTURALLY SIGNIFICANT
	1	2	3	4	

[CHAPTERS 228 THROUGH 234 RESERVED]

[CHAPTERS 228 THROUGH 234 RESERVED]

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CHAPTER 26 MONITOR FAR PART 91 OWNER'S INSPECTION PROGRAM

Section 1 Background

1. **PTRS ACTIVITY CODES**

A. *Maintenance:* 3425 through 3429

B. *Avionics:* 5425 through 5429

3. **OBJECTIVE.** This chapter discusses the procedures to monitor aircraft and aircraft inspection programs under FAR Part 91.

5. **INSPECTION PROGRAMS.** Several types of inspection programs are available to the FAR Part 91 owner/operator.

A. *Annual and 100-Hour Inspections.* The annual and 100-hour inspections are identical in scope and detail. The only difference is in the performance and approval of the annual inspection, which must be accomplished by a person authorized under FAR §§ 43.3 and 43.7, as provided in FAR Part 65.

(1) FAR § 43.11 requires persons approving or disapproving equipment for return to service after any required inspection to make an entry in the record of that equipment. An approved repair station documenting compliance with an annual inspection in the aircraft maintenance records meets the requirements of FAR § 43.11.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(a) An owner maintaining separate records for the airframe, powerplants, propellers, appliances, and components will make the entries for the 100-hour inspection in each record and make the entry for the annual inspection in the aircraft maintenance record (FAR §§ 91.417 {91.173} and 43.11).

(b) An owner/operator shall ensure that maintenance personnel make appropriate entries in the records for the airframe, powerplants, propellers, appliances, and components. Owner/operators keeping the required records together in a single record will make the entry of the annual inspection in that record. The entries for 100-hour inspections and other maintenance also will be made in this record, as required by FAR § 91.417 {91.173}.

(2) *Annual Inspections.* FAR § 91.409(a) {91.169(a)} requires that any person who operates aircraft must assure that the aircraft has been inspected according to the requirements of FAR Part 43.

(a) Annual inspections are designed to provide a complete and comprehensive inspection of an aircraft. They are performed at least each 12 calendar months by persons authorized under FAR § 43.3. The inspection determines the condition of the aircraft and the maintenance required to return the aircraft to an airworthy condition. Appendix D of FAR Part 43 defines the scope and detail of an annual inspection.

(b) The owner/operator of an aircraft may have annual inspections at any interval that does not exceed the maximum of 12 calendar months between inspections, as specified by FAR § 91.409(a)(1) {91.409(a)(1)}. For example, an aircraft inspected and approved upon any day of a calendar month will become due for inspection upon the last day of the same month, 12 months later.

(c) FAR § 43.15 and Appendix D provide that all systems, components, and appliances shall be checked to assure proper installation and satisfactory operation.

- Before conducting surveillance of annual inspections performed by maintenance personnel, inspectors should become familiar with the manufacturer's recommended inspection procedures, special instructions, etc.

- Inspectors also should know the acceptable degree of deterioration or defect permitted by the manufacturer, as set forth in the manufacturer's manuals or other data

(d) In all cases, persons authorized to perform inspections under FAR §§ 43.3 and 43.7 must determine from records and physical inspection that the aircraft conforms to the contents of the following:

- Aircraft Specification or Type Certificate Data Sheets
- Supplemental Type Certificate, if applicable
- Airworthiness Directives

(e) The above documents must be available to the maintenance personnel conducting an inspection. Applicability of a Supplemental Type Certificate may be determined by reference to the aircraft maintenance records.

(f) The inspection is not considered complete until the required recording procedures of FAR §§ 43.11 and 91.417 {91.173} are met.

- Under the provisions of FAR § 43.11, the agency or person approving or disapproving for return to service is responsible for recording the inspection in the maintenance records
- If the person conducting the inspection finds the aircraft to be unairworthy, appropriate entries must be made in the aircraft maintenance records. The owner/operator must be furnished a list of discrepancies or unairworthy items.
- The owner/operator must ensure that the maintenance records contain proper entries according to FAR § 91.417 {91.173}. The owner/operator must have discrepancies found during the inspection repaired, as prescribed in FAR Part 43, before the aircraft is returned to service.

(g) When conducting surveillance, airworthiness inspectors will review aircraft maintenance records to determine if the requirements of an annual inspection have been accomplished.

(3) *100-Hour Inspection.* Appendix D of FAR Part 43 defines the scope and detail of a 100-hour inspection. One-hundred-hour inspections are required in addition to annual inspections under the following situations:

- Aircraft are operated for carrying persons for compensation or hire
- Aircraft are used for flight instruction for hire, if furnished by the flight instructor

NOTE: When a flight instructor is not included in the rental agreement, a 100-hour inspection is not required on an aircraft when it is rented out.

B. *Progressive Inspections.* The progressive inspection must be a complete inspection of the aircraft, conducted in stages, with all stages to be completed in a period of 12 calendar months.

(1) An owner/operator desiring to use a progressive inspection program must submit a written request to the Flight Standards District Office (FSDO) with jurisdiction over the area in which the applicant is located.

(a) The owner/operator may develop a progressive inspection program tailored to fit the operation.

(b) Progressive inspection programs developed by the manufacturer do not automatically fit the needs of each individual operator; inspectors should review them on a case-by-case basis.

(c) The owner/operator's progressive inspection program may be more restrictive than the manufacturer's program, but it may not be less restrictive unless sufficient justification is presented to and accepted by the FAA.

(2) The inspector should not attempt to establish for the owner/operator arbitrary intervals for the inspection or overhaul of aircraft. Intervals should be based on the manufacturer's recommendations, field service experience, malfunc-

tion and defect history, and the type of operation in which the aircraft is engaged.

(3) If the progressive inspection is discontinued, the owner or operator shall notify the local FAA Flight Standards District Office in writing immediately. After the discontinuance, the first annual inspection is due within 12 calendar months after the complete inspection has been accomplished according to the progressive inspection program.

C. *Large Airplane (Over 12,500 lbs.) and Turbine Powered (Turbojet and Turbopropeller) Multiengine Airplane Inspection Programs.* These aircraft must be inspected according to the requirements of an inspection program selected by the owner/operator. FAR § 91.409(f) {91.169(f)} outlines various options available to the owner/operator.

(1) It may appear that some of the options specified in FAR § 91.409(f)(1) through (3) {91.169(f)(1) through (4)} do not involve the field inspector, as they refer to previously approved and manufacturer recommended programs. However, inspectors should recognize that these programs must be either currently recommended by the manufacturer or currently in use by the operators of FAR Parts 121, 127, or 135 who are supplying the program. The intent of this requirement is to prevent the use of obsolete programs.

(2) Reference to a manufacturer recommended program has led to several misconceptions about what precisely constitutes such a program.

(a) FAR § 91.409(f)(3) {91.169(f)(4)} refers to "A current inspection program recommended by the manufacturer." No reference is made to the aircraft manufacturer specifically. FAR § 91.409(e) {91.169(e)} however, requires inspection of the airframe, engines, propellers, appliances, survival equipment, and emergency equipment.

(b) Therefore, a complete manufacturer's recommended program consists of the program supplied by the airframe manufacturer and supplemented by the inspection programs provided by the manufacturers of the engines, propellers, appliances, survival equipment, and emergency equipment installed on the aircraft.

NOTE: Because this program addresses inspections only, it does not include service bulletins, service letters, service instructions, and other maintenance documents, unless they require an inspection to be performed.

D. *Approved Aircraft Inspection Programs (FAR §§ 91.409 and 91.415) {91.169 and 91.170}.* FAR Part 91 addresses the use of approved aircraft inspection programs in three sections. The following quotes from FAR Part 91 are cited because of frequent misinterpretation of the term "approved aircraft inspection program" by operators and FAA personnel alike.

(1) FAR § 91.409(f) {91.169(f)} states that the owner/operator must select, identify, and use one of the inspection programs. FAR § 91.409(f)(2) {91.409(f)(2)} presents as one of the options "an approved aircraft inspection program (AAIP) approved under FAR § 135.419 . . . and currently in use by a person holding an operating certificate issued under FAR Part 135."

(2) FAR § 91.409(g) {91.169(g)} states "Each operator of an airplane desiring to establish or change an approved inspection program under paragraph (f)(4) of this section must submit the program for approval to the local FAA Flight Standards District Office having jurisdiction over the area in which the airplane is based." The approved inspection program spoken to in this section is not to be confused with an *Approved Aircraft Inspection Program* (AAIP) as allowed in FAR § 91.409(f)(2) {91.409(f)(2)}.

(3) FAR § 91.415(a) {91.170(a)} states "Whenever the Administrator finds that revisions to an approved aircraft inspection program under FAR § 91.409(f)(4) {91.169(f)(5)} are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the Administrator, make any changes in the program found necessary by the Administrator." The inspection program referenced in this section is not to be confused with an approved aircraft inspection program (AAIP) approved under the requirements of FAR § 135.419.

NOTE: The inspector should ensure that the program includes inspection of all systems, including avionics and emergency equipment.

7. COMPUTERIZED RECORD KEEPING AND ALERTING PROGRAMS. Computer companies have made available computer programs designed to function as maintenance tracking programs. These programs do not have the prior approval of the FAA.

A. To use one of these programs, the aircraft owner/operator must present the program to the FAA for approval. FAA approval of one of these computerized programs for one owner/operator does not constitute approval for use of the same program by all operators.

B. FAA approval of a particular computerized program for an individual operator does not grant approval of the program for the computer company.

(1) Each computerized program must be approved for the individual owner/operator. No other form of approval is acceptable.

(2) Use of the computerized companies' services is for data collection and distribution only.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION

A. *Prerequisites.* This task requires knowledge of FAR Parts 43, 65, and 91, and FAR § 135.419.

B. *Coordination.* This task requires coordination between maintenance and avionics inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Part 39
- Advisory Circular 39-7, Airworthiness Directives, as amended
- Advisory Circular 43-9, Maintenance Records, as amended
- Advisory Circular 43.9-1, Instructions for Completion of FAA Form 337, Major Repair and Alteration, as amended
- Advisory Circular 43-16, General Aviation Airworthiness Alerts, as amended
- Advisory Circular 91-38, Large and Turbine Powered Multiengine Airplanes Part 91, Subpart D, as amended

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review and Accept a Progressive Inspection Program*

(1) Advise the owner/operator desiring a progressive inspection program to submit a letter of intent and a copy of the program, as required by FAR § 91.409 {91.169}.

NOTE: The inspector should carefully review FAR § 91.409(d) {91.169(d)} prior to analysis of the program.

(2) Upon receipt of the letter of intent and the program, ensure the following:

- The program includes the entire aircraft and its components
- The program will provide a complete inspection of the aircraft within 12 calendar months. Inspection intervals should be based on the manufacturer's recommendations, field service experience, malfunction or defect history, and the type of operation in which the aircraft is engaged.
- The scope of the inspection equals that of an annual-type inspection
- The progressive inspection schedule ensures that the aircraft at all times will be airworthy

and will conform to all applicable FAA aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data

- The program includes procedures for the immediate, written notification of the local FAA Flight Standards District Office upon the discontinuance of the progressive program and the assumption of an annual inspection program

(3) Analyze results of the review.

(4) Notify the operator in writing of any deficiencies found in the program.

(a) Request that the operator inform the FAA of plans for resolving deficient items.

(b) Once deficiencies have been corrected to meet the requirements of FAR § 91.409 {91.169}, notify the operator in writing that the program has been accepted.

(5) Establish and maintain an operator file according to agency orders. The file should include a copy of the program and all related correspondence.

B. *Approve an Inspection Program Under FAR § 91.409(f)(4) {91.169(f)(5)}*

(1) Advise the operator of a large airplane, multiengine turbojet or turbopropeller powered airplane desiring an approved inspection program to submit the program for approval to the appropriate Flight Standards District Office.

(2) Ensure the program is in writing and details the following:

- Instructions and procedures for conducting inspections, including necessary tests and checks

- Inspection intervals, expressed in terms of time in service, calendar time, number of system operations, or any combination of these

- The parts and areas that must be inspected

(3) Compare the submitted program with the manufacturer's recommended program. Ensure the applicant completely justifies all deletions of items and inspection period escalations. Where there is no manufacturer's recommended program, use a time-tested program for comparison purposes.

(4) Ensure that the program developed by the applicant provides a level of safety equivalent to or greater than that provided by the inspection options of FAR §§ 91.409(f)(1) through (3) {91.169(f)(1) through (4)}.

(5) Indicate approval on the cover page of the inspection program. Include the date of approval, the inspector's signature, and the office name, number, and location. Stamp each succeeding page with the district office stamp, date, and the initials of the inspector.

C. *Review Maintenance Records.* Ensure that persons approving and disapproving equipment for return to service after any required inspection have entered the inspection in the record of that equipment. Verify that when an owner maintains a single record, the entry for required inspections is made in that record. Ensure that if the owner maintains separate records for the airframe, engines, powerplants, propellers, appliances, and components, the entry for required inspections is made in each.

(1) *Annual/100-Hour Inspection.* Review records to ensure compliance with the requirements of FAR §§ 43.11 and 91.417 {91.173}. Determine that appropriate entries have been made to meet the regulatory requirements.

NOTE: The annual and 100-hour inspections are identical in scope and detail. The only difference is in the performance and approval of the annual inspection, which must be accomplished by a person authorized under FAR §§ 43.3 and 43.7.

(2) *Progressive Inspection.* Ensure records indicate the following:

- Completion of an annual inspection within the past 30 days prior to the commencement of inspections under a progressive inspection program

- Compliance with inspection intervals prescribed in the progressive program

- Completion of the inspection cycle within 12 calendar months

(3) *Large Airplane (Over 12,500 lbs.) and Turbine-Powered (Turbojet and Turbopropeller) Multiengine Airplane Inspection Programs.* Ensure the maintenance records indicate that the owner/operator has identified and is using a selected program according to FAR § 91.409(f) {91.169(f)}. Ensure that any inspection program with a computerized record keeping and alerting system has prior approval by the FAA. Verify that this system reflects the current airworthiness requirements for the individual airplane.

D. *Conduct Surveillance of the Aircraft.* Examine the aircraft to determine, to the extent possible, that it is in condition for safe operation. Ensure the inspection is accomplished either in the presence of or with specific approval from the owner/operator. The following are examples of items to be checked:

- Proper internal and external placarding

- Obvious signs of excessive wear and deterioration, including corrosion, worn places on tires, nicks in the leading edge of the propeller blades, broken windshields, etc.

- Condition of fabric on fabric-covered control surfaces, wings, or fuselages

- The interior of the aircraft for obvious deterioration

- Evidence of any other condition that would render the aircraft unsafe for flight

7. TASK OUTCOMES

A. *File a Completed PTRS Transmittal Form.*

B. Successful completion of the task will result in acceptance and/or approval of the inspection programs.

9. FUTURE ACTIVITIES. Carefully monitor inspection systems for compliance with appropriate Federal Aviation Regulations and for continued airworthiness of subject aircraft. Determine that maintenance practices are performed at an adequate level of safety. Direct particular attention to any areas where trends indicate a faulty inspection system or inadequate maintenance. Take immediate action to correct any deficiencies.

CHAPTER 27 INSPECT FAR PART 91 MAINTENANCE RECORDS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3681

B. *Avionics:* 5681

3. OBJECTIVE. This chapter describes the process used to inspect the maintenance records required by FAR Part 91.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

5. GENERAL. FAR § 91.417 {91.173} establishes the recordkeeping responsibilities and requirements for the owner/operator of the aircraft. FAR §§ 43.9 and 43.11 establish the recordkeeping responsibilities and requirements for the personnel who maintain the aircraft.

A. *Current Airworthiness Directive Status.* The owner/operator must keep a record showing the current status of applicable Airworthiness Directives.

(1) This record must include the following:

- A list of Airworthiness Directives applicable to the aircraft, to include the Airworthiness Directive numbers and revision dates
- The method of compliance
- The time when the next action is required for a recurring Airworthiness Directive

(2) An acceptable method of compliance should include a reference to one of the following:

- A specific portion of the Airworthiness Directive
- A manufacturer's service bulletin, if the bulletin is referenced in the Airworthiness Directive
- Another document generated by the person performing the maintenance that shows compliance with the Airworthiness Directive, such as an Engineering Order (EO) or Engineering Authorization (EA)

(3) When an Engineering Order/Authorization is used, the details must be retained by the person performing the maintenance. If the Engineering Order/Authorization also contains the accomplishment instructions and sign-off, it must be retained with the aircraft indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

(4) The document that contains the current status of Airworthiness Directives/method of compliance may be the same as the record of Airworthiness Directive accomplishment. This record must be retained with the aircraft indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

B. *Total Time in Service Records.* FAR Part 91 requires the total time in service records for airframes, engines, and propellers to be retained by the owner/operator. These records are used to schedule overhauls, retirement life limits, and inspections.

(1) Total time in service records may consist of the following:

- Aircraft maintenance record pages
- Designated cards or pages
- A computer listing
- Other methods accepted by the Administrator

(2) Total time in service records must be retained with

the aircraft indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

C. *Life Limited Parts Current Status Records.* FAR Part 91 requires the owner/operator to retain a current status record for each airframe, engine, propeller, rotor, and appliance component that is identified to be removed from service when the life limit has been reached.

(1) The current life limited status of the part is a record indicating the life limit remaining before the required retirement time of the component is reached. This record should include any modification of the part according to Airworthiness Directives, service bulletins, or product improvements by the manufacturer or applicant.

(2) The following are not considered current life limited status records:

- Work orders
- Purchase requests
- Sales receipts
- Manufacturers' documentation of original certification
- Other historical data

(3) Whenever the current status of life limited parts records cannot be established and the historical records are not available, the airworthiness of that product cannot be determined and it must be removed from service.

(4) Current status of life limited parts records must be retained with the aircraft indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

D. *Approval for Return to Service*

(1) Following the performance of maintenance, preventive maintenance, or alterations on an aircraft, an approval for return to service must be completed before the aircraft is operated.

(2) The person approving/disapproving the return to service on the aircraft, airframe, engine, propeller, rotor, appliance, or component must make an entry in the maintenance record that contains the following information:

- The type of inspection, with a brief description of the extent of the inspection
- The date of the inspection and the aircraft total time in service
- The signature, certificate number, and type of certificate of the person making the approval/-disapproval

E. *Overhaul Records*

(1) A record must be made by the person performing maintenance when overhauling an item of aircraft equipment. This record must include the following:

- A description of the work performed or a reference to data acceptable to the Administrator
- The date of completion of the work performed
- The name of the person performing the work
- The signature and certificate number of the individual approving the aircraft for return to service

NOTE: A return to service tag does not constitute an overhaul record, but may be used to reference the overhaul records.

(2) The owner/operator must retain the record and make it available to the Administrator upon demand. The overhaul records must be retained until the work is superseded by work of equal scope and detail.

F. *Current Aircraft Inspection Status.* The owner/operator must retain records identifying the current inspection status of each aircraft. These records must show the time in service since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.

G. *Major Repair and Major Alteration Records.* The owner/operator must retain the records for each major repair/-

alteration made to an aircraft, including work done on the following:

- Airframe
- Engine
- Propeller
- Rotor
- Appliance

(1) The records for major repairs must be retained until the work is repeated or superseded, or for one year after the work has been performed.

(2) The records for major alterations must be retained with the aircraft indefinitely. If the airplane is sold, the records must be transferred to the purchaser.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of regulatory requirements of FAR Parts 43 and 91
- Successful completion of the Airworthiness Inspectors Indoctrination String Course or equivalent

B. *Coordination.* This task will require coordination with the owner/operator and the person(s) performing the maintenance.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Part 39
- Order 8300.10, Airworthiness Inspector's Handbook, Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, and Ch. 3, Conduct Ramp Inspection of Operator's Aircraft
- Advisory Circular 39-7, Airworthiness Directives, as amended
- Advisory Circular 43-9, Maintenance Records, as amended

B. *Forms*

- FAA Form 8020-2, Aircraft/Parts Identification and Release

C. *Job Aids.* None.

5. PROCEDURES

A. *Contact the Owner/Operator.* Arrange to obtain the aircraft maintenance records for review. If custody of the records is to be temporarily transferred to the FAA, provide FAA Form 8020-2, Aircraft/Parts Identification and Release, to the owner/operator as a receipt.

B. *Review the Owner/Operator's Maintenance Records.* Determine whether the recordkeeping requirements of the Federal Aviation Regulations have been met.

(1) Ensure the entries for maintenance include the following:

- A description of the work performed or a reference to data acceptable to the Administrator
- The date of completion
- Signature and certificate number of the person approving the aircraft for return to service

(2) Ensure entries for inspection include the following:

- Type of inspection

- Brief description of the extent of the inspection
- Date of the inspection
- Total time in service for the aircraft
- Signature, certificate number, and type of certificate held by the person approving or disapproving the aircraft for return to service
- A statement certifying the airworthiness status of the aircraft

(3) Ensure the owner/operator has records containing the following information:

- Total time in service for the airframe
- The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance
- Total time since last overhaul for those items installed on the aircraft that are required to be overhauled on a specified time basis
- Current inspection status of the aircraft, including time since last inspection, as required by the program under which the aircraft and its appliances are maintained
- Copies of FAA Form 337, Major Repairs and Alterations, for each major alteration to airframe, engine, rotors, propellers, and appliances

(4) Ensure the owner/operator has records for the current status of each applicable Airworthiness Directive, including the following:

- A list of Airworthiness Directives applicable to the aircraft, to include the Airworthiness Directive numbers and revision dates
- The method of compliance
- The time when the next action is required for a recurring Airworthiness Directive

C. *Analyze Results.* Bring any discrepancies to the attention of the owner/operator.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. *Return Records to the Owner/Operator*

C. *Document the Task.* File all supporting paperwork in the owner/operator's office file.

9. FUTURE ACTIVITIES. Routine surveillance.

[CHAPTERS 28 THROUGH 35 RESERVED]

CHAPTER 42 INSPECT FAR PART 121 OPERATOR'S MAINTENANCE RECORDS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3358

B. *Avionics:* 5358

3. OBJECTIVE. This chapter describes the process used to inspect an operator's aircraft maintenance records under FAR Part 121.

5. GENERAL

A. Aircraft maintenance records include any records that document the performance of work on an aircraft. An operator's aircraft maintenance records must be inspected periodically to ensure that they meet the requirements of the operator's approved recordkeeping system.

B. *Surveillance Criteria.* While inspecting an operator's aircraft maintenance records, principal inspectors must determine that all the work was based on instructions, procedures, or information that has been previously approved or accepted by the FAA. Such data can be in the form of:

- Manufacturer's manuals
- Service bulletins
- Service letters
- Data included in the operator's approved inspection and/or maintenance programs
- Approved Engineering Orders or Authorizations
- Airworthiness Directives
- Other accepted documents

C. *Personnel Identification Recording Requirements.* The certificate holder's manual must provide for a positive means of identification, such as an employee identification number, for any person performing or approving work.

7. RECORD REQUIREMENTS

A. *Retaining Airworthiness Releases*

(1) Airworthiness releases must be retained by the operator for two months.

(2) All of the records necessary to show that the requirements for the issuance of an airworthiness release have been met must be retained until the work is repeated or superseded, or for one year.

B. *Total Time in Service Records*

(1) The total time in service record is a record starting from the date of manufacture and continuing through the life of the aircraft.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(2) When an engine is rebuilt and certified to zero time, total time in service becomes zero (FAR § 91.421 {91.175}).

C. *Life Limited Parts.* Operators must have a current record of the status of life limited items. This record indicates the present accumulated time in service of each life limited item.

NOTE: Life limited parts may not be rebuilt and certified to zero time.

D. *Records of Overhaul.* An operator must maintain overhaul records of any item required to be overhauled. These

records must be maintained until the work is superseded or repeated by work of equivalent scope and detail.

E. *Inspection Status.* Inspection status defines the work that has been and is scheduled to be performed per the inspection or maintenance program. The inspection status records must show the following:

- Type of most recent inspection
- The time at which that inspection was performed
- The time since the most recent inspection expressed in terms of hours, cycles, or calendar time
- The scheduled time and type of next inspection

F. The operator must maintain a record of the current status of all applicable Airworthiness Directives for the operator's equipment. Some acceptable sources of procedures for compliance with Airworthiness Directives are:

- Service bulletins
- Service letters
- Specific instructions provided in the Airworthiness Directive
- Approved Engineering Orders or Authorizations

NOTE: Only data specifically approved for Airworthiness Directive accomplishment by the appropriate Aircraft Certification Office is authorized.

G. *Major Repair and Major Alteration Records.*

(1) An operator must prepare a report of each major repair and major alteration.

(a) The major alteration report must be sent to the Certificate Holding District Office.

(b) A copy of the major repair report must be kept available for inspection.

(2) Additionally, the operator must keep a list of all current major alterations.

NOTE: AFS-330 is developing additional clarification on the maintenance record requirements for major repairs and major alterations.

9. REPAIR STATION RECORDS OF WORK PERFORMED ON OPERATOR'S AIRCRAFT. Since repair stations only have to retain records of work performed for two years, some operators have reported that maintenance records are not always available from repair stations beyond the two year retention period. Since the operator is always responsible for obtaining and retaining the records required by the Administrator, operators should be advised to require a copy of the work documentation from the repair station at the time that the work is performed.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 121
- Successful completion of the Airworthiness Inspectors Indoctrination String Course or equivalent
- Familiarity with the type of operation being inspected

B. *Coordination*

(1) This task requires coordination between the principal inspectors, the operator, and with AVN-120, as applicable.

(2) If the task is performed by the office with geographic responsibility, coordinate with Certificate Holding District Office principal inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 39, 43, 65, and 145

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review the Office File*

B. *Inspect the Maintenance Records.* Ensure the operator has retained the required maintenance/alteration/-inspection records for each aircraft, including airframe, engine, propeller, and appliances. These records should include the following:

(1) A description of the work performed (data acceptable to the Administrator), including the date of completion

(2) The name of the person performing the work if that person is not an employee of the operator

(3) The name or other positive identification of the person approving the work

C. *Inspect the Operator's Record System.* Inspect records to ensure manual procedures are being followed. During inspection, document and photocopy any confusing areas, obvious omissions or apparent discrepancies. Records checked should include the following:

(1) *Airworthiness releases*

(a) Ensure that the operator is retaining airworthiness releases for at least 60 days.

(b) Ensure that the airworthiness release signature is authorized by the operator.

(c) Review the signer's training record to ensure the person is trained to the level identified in the operator's manual.

(2) *Flight/Maintenance logs.* Obtain and review the flight/maintenance logs to determine the effectiveness of the airworthiness release procedures following scheduled inspections and non-routine maintenance. Review the records to ensure the following:

(a) Flight discrepancies are entered after each flight

(b) Corrective actions are related to the discrepancy

(c) Corrective actions and sign-offs are entered in the maintenance record per manual procedures

(d) Repetitive discrepancies are handled according to the manual

(e) Deferred maintenance as authorized by the Minimum Equipment List (MEL) is deferred per the operator's MEL and manual instructions

(f) Required Inspection Items (RII) are signed off per the manual instructions and the inspector was authorized by the operator to perform the inspection

(3) *Scheduled inspections.* Select or obtain work packages for scheduled inspections and ensure the following:

(a) That scheduled inspections are properly signed off

(b) That generated non-routine items are properly signed off

(c) That Required Inspection Items are properly identified and signed off by properly authorized, qualified, certificated, and trained personnel

(d) That repairs are categorized correctly (major or minor) and that approved data is being used

(4) *Total time in service records.* Compare the manual procedures with the actual accomplishment of the total

time/cycles in service records for the airframe, engine, propeller and rotor.

NOTE: Although FAR Part 121 does not specifically call for time/cycles in-service records of engines, propellers, and rotors, it is difficult for an operator to control the maintenance program without those records.

(a) Select and obtain a total time/cycles in-service record for a sample number of aircraft to ensure that cumulative flight times/cycles are added to the record.

(b) Make a spot check of the cumulative total time/cycle in service against the flight logs to ensure that daily entries correspond to the flight log.

(c) If the operator maintains a handwritten maintenance record for engines, compare the record entries to the aircraft flight log entries for the following:

- Overall accuracy
- The possible transposition of flight time/cycles in service, numbers, etc.

(5) *Life limited parts records.* Compare the manual procedures for life limited parts with the actual recording of the current status of life limited parts. Select a random sample of records and ensure the following:

(a) All life limited parts described on type certificate data sheets or in a manual referenced on the type certificate data sheets are noted

(b) The current status of each part is provided, to include:

- Total operating hours/cycles accumulated
- Life limit (total service life)
- Remaining time/cycles
- Modifications

(c) The time/cycles limits on the operator's list are the same as those on the type certificate data sheets

(d) Life limits have not been exceeded. Select a sample of life limited items that have been installed within the last 12 months and review records to ensure that life limited time was carried forward from the previous service record.

(e) If overhauled, the overhaul record is available

(f) The life limit of an item has not been changed as a result of the overhaul

(6) *Overhaul records.* Compare the manual procedures for maintaining the overhaul record with the actual overhaul record content.

(a) Select a random sample of overhauled items to ensure the following:

- Overhaul records are available for items selected
- The records contain a description of the overhaul
- The item was overhauled per the overhaul specifications by a qualified and authorized person
- The component was approved for return to service by an authorized person

(b) Review removal/installation records of overhauled components to determine if the overhaul was done within the authorized time limits. Current regulations require these records to be maintained until the work is superseded by work of equivalent scope and detail.

(7) *Inspection status records*

(a) Compare the manual procedures for maintaining the current aircraft inspection status with available records to ensure that the recorded daily flight hours/cycles are used to obtain the current inspection status.

(b) Take a random sample of aircraft inspection records to ensure that scheduled inspections times/cycles were not exceeded (overflown).

(8) *Airworthiness Directives.* Request a random sample of aircraft Airworthiness Directive compliance records to ensure the following:

(a) The records contain all applicable Airworthiness Directives for the sampled aircraft

(b) That Airworthiness Directive requirements were accomplished within the effective times of the Airworthiness Directive

NOTE: Special emphasis should be put on checking recurring Airworthiness Directives.

(c) The Airworthiness Directive record contains current status and method of compliance. The current status must include the following:

- A list of all Airworthiness Directives applicable to the aircraft
- Date and time of compliance
- Time and/or date of next required action (if recurring Airworthiness Directive)

(d) The record is being retained indefinitely

NOTE: If any Airworthiness Directives have an alternative method of compliance, ensure the operator has obtained prior approval for that alternative method.

(e) The method of compliance is the same as specified in the Airworthiness Directive

(f) The date of compliance is identical with the date on the current status list

(g) The mechanic/inspector was properly trained and authorized to accomplish the work

(h) The accomplishment was properly signed off

(9) *Major alteration and major repair records*

(a) Compare the manual procedures for maintaining a list of major alterations and the reports for major repairs with the actual work records.

(b) Compare a random sample of major repair and alteration records to the alteration and repair list and/or reports to ensure the following:

- List and/or reports contain the date of accomplishment and a brief description of the work
- The respective maintenance records show that the work was accomplished per approved data

NOTE: When major alterations or major repairs are identified and not recorded on the above-mentioned list or report, request the actual maintenance accomplishment record and the FAA approved data from the operator.

D. *Analyze the Findings.* Evaluate all deficiencies to determine if corrective actions will be required.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task may result in the following:

- If the inspection was performed by the office having geographic responsibility, a report of any deficiencies submitted to the Certificate Holding District Office
- A letter from the Certificate Holding District Office informing the operator of the results of the inspection
- Enforcement Investigation Report, as applicable

C. *Document the Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

CHAPTER 43 MONITOR FAR PART 121 EXTENDED-RANGE OPERATIONS WITH TWO-ENGINE AIRCRAFT (ETOPS)

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3647

B. *Avionics:* 5647

3. OBJECTIVE. This chapter describes the process of monitoring a FAR Part 121 operator authorized for extended-range operations with two-engine airplanes under FAR Part 121.161(a).

5. GENERAL. Since extended range programs have such a great potential for adverse safety impact if not properly administered, inspectors dealing with ETOPS must place special emphasis on surveillance activities.

A. Surveillance should include scheduling, coordinating, and reviewing the following, as applicable:

- Trend analysis
- Problem identification and resolution
- Implementation of corrective actions

(1) During surveillance, report events or problems to the Aircraft Evaluation Group, ANM-270 or ANE-270, within 72 hours.

(2) In addition to the items required to be reported by FAR §§ 21.3 and 121.703, the following information should be included:

- In-flight shut downs
- Diversions or turnbacks
- Uncommanded power changes or surges
- Inability to control the engine or obtain desired power
- Problems in systems considered to have a fundamental influence on flight safety
- Failure to start the APU while airborne
- Uncommanded inflight shut-downs of the APU
- Any other event the inspector considers detrimental to extended-range operations

(3) Items/systems that are considered critical to flight safety include the following:

- Electrical, including batteries
- Hydraulic
- Pneumatic
- Flight instrumentation
- Fuel
- Flight control
- Ice protection
- Engine start and ignition
- Propulsion system instruments
- Navigation and communications
- Auxiliary power-units
- Air conditioning and pressurization
- Cargo fire suppression
- Emergency equipment
- Any other equipment that is required for extended range operations

(4) The event or problem reports must contain the following information:

- The type of aircraft
- The N-number of the aircraft

- The Engine type and serial number
- The total time and cycles, including the last inspection or shop visit
- The total time since overhaul or inspection of the unit or the system affected
- The phase of flight, to include climb, cruise, and descent. Coordinate with operations inspectors to acquire information such as speed, altitude, ambient temperatures, and atmospheric conditions during the event.
- The location and length of the diversion or turnback
- Any corrective actions taken
- Any other information pertinent to the event

(5) Each month, the inspector must acquire and provide to the Aircraft Evaluation Group the following information:

- A summary of in-flight shut down rates (12 month rolling average)
- Any delays and cancellations
- All ground events (aborted takeoff, power shortfall or loss, and engine removals)

B. *Approved Maintenance Program Changes.* Operator submitted maintenance program changes must meet the following criteria prior to approval:

(1) Changes must be submitted with supporting documentation

(2) Changes must be submitted at least 60 days prior to the scheduled implementation

(3) Changes must enhance the program without deleting or degrading approved program elements

NOTE: Under no circumstances should the inspector allow changes to be made to Certification Maintenance Requirements (CMR) or Configuration Maintenance Procedures document (CMP) without prior approval from FAA Engineering and/or Flight Standards Service.

C. *Trend Analysis*

(1) Surveillance should be directed toward the identification and correction of adverse trends found during APU, airframe, and propulsion systems monitoring.

(2) Other indications of adverse trends include the following:

- Repeat write-ups by the pilot
- The degradation of engine condition
- High fluid consumption rates
- The recurrence of deficient areas as identified by the carrier's continuing analysis and surveillance program
- Any patterns of irregularities, overly frequent repairs, etc.

D. *Reducing Diversion Times.* When adverse trends and/or maintenance problems have been detected, a reevaluation of the operator's program should be performed.

(1) This reevaluation should be performed by the operator and the Certificate Holding District Office with consultation from the Propulsion System Reliability Assessment Board (PSRAB).

(2) Based on the results of the reevaluation, the Principal Airworthiness Inspector will make a written recommendation to be submitted to AFS-300.

E. *Reinstating Diversion Times.* In order to reinstate an operator's diversion times the operator must first develop and submit a Corrective Action Plan to the Principal Airworthiness Inspector.

(1) When reviewing the operator-submitted Corrective Action Plan, the Principal Airworthiness Inspector should compare the Corrective Action Plan to the recommendations set forth in the Evaluation Report. The Principal Airworthiness Inspector should cooperate with the operator during the development of the Corrective Action Plan but should not become involved in the actual writing of the plan.

(2) Upon operator initiation of the corrective actions, the Principal Airworthiness Inspector must perform specific surveillance of those corrective actions in addition to the

normal surveillance of the ETOPS program.

(a) After a minimum of six months of additional surveillance the Principal Inspector must perform an in-depth audit to verify the effectiveness of the corrective actions.

(b) When the Principal Airworthiness Inspector is satisfied that the problems have been solved, a recommendation can be made to AFS-300 for reinstatement or adjustment of the diversion times. For example, a suspended diversion time of 180 minutes could be reinstated to 120 minutes.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 121
- Knowledge of Advisory Circular 120-42, Extended-Range Operation With Two-Engine Airplanes, as amended
- Successful completion of the Air Carrier Airworthiness Inspectors Indoctrination String Course
- Successful completion of the Aircraft Maintenance Reliability Program Course, when available
- Successful completion of the Aircraft Systems Training Course, when available

B. *Coordination*

(1) This task requires coordination among maintenance inspectors, avionics inspectors, Regional offices, AFS-400, and AFS-300 or the Propulsion System Reliability Assessment Board (PSRAB), as required.

(2) For questions regarding an ETOPS authorization, contact the following, as required:

- AFS-330, Maintenance Division
- Aircraft Evaluation Group (AEG)
- Aircraft/Engine Certification Directorate

(3) For questions regarding an ETOPS Minimum Equipment List, contact the following, as required:

- AFS-300, Aircraft Maintenance Division
- AFS-260, Program Management Branch

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Operator's manuals
- Operations Specifications

B. *Forms*

- FAA Form 8400.8, Operations Specifications

C. *Job Aids.* None.

5. PROCEDURES

A. *Monitor the Operators Program.* Ensure the following:

(1) The approved extended-range maintenance programs are followed as outlined in the maintenance manual sections that are referenced in the operations specifications

(2) Operator-proposed changes to the approved extended-range maintenance program are submitted to the Certificate Holding District Office for review 60 days prior to implementation

NOTE: The inspector must report events or problems to the Aircraft Evaluation Group, ANM-270, or ANE-270, within 72 hours.

B. *Submit Reports*

(1) On a monthly basis, provide to the Aircraft Evaluation Group the following information:

- A summary of in-flight shut down rates

- Any delays and cancellations
- All ground events (aborted takeoff, power shortfall or loss, and unscheduled engine removals)

(2) Respond to special events by gathering and submitting the following information to the requesting FAA authorities:

- Engine condition monitoring and oil condition monitoring program summaries
- Component removal failure summaries
- Pilot reports
- Any other information, as requested

C. *Review Trend Analysis.* Perform an immediate evaluation of the operator's program when any of the following occur:

- The propulsion system IFSD exceeds .05/1000 engine hours for a 120-minute operation (based on a 12 month rolling average)
- The propulsion system IFSD exceeds .03/1000 engine hours for a 180-minute operation (based on a 12 month rolling average)
- Any significant diversions occur due to airframe and/or powerplant induced discrepancies

NOTE: Consideration must be given to operators with small fleets due to the impact of a single event on the statistical rate. In these circumstances a review of the specific events will be more useful.

D. *Reduce Diversion Times*

(1) When adverse trends and/or maintenance problems have been detected ensure that an immediate evaluation is performed by the operator and the Certificate Holding District Office. If necessary, contact the Propulsion System Reliability Assessment Board (PSRAB) for consultation.

(2) Submit a report outlining the identified problems and any corrective actions to the Director, Flight Standards Service.

(3) Based on the results of the evaluation, make a written recommendation and submit it to AFS-300.

E. *Reinstate Diversion Times*

(1) Review and, as appropriate, approve the operator-submitted Corrective Action Plan.

(2) Schedule and conduct an in-depth audit of the ETOPS program corrective actions after a minimum of six months of additional surveillance.

(3) Upon completion of the audit make the appropriate recommendation on the reinstatement or adjustment of the diversion times, in writing, to AFS-300.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task will result in the following:

(1) For normal surveillance, submittal of required reports

(2) For reduction of diversion times, a written recommendation submitted to AFS-300

(3) For reinstatement or adjustment of diversion times, a written recommendation to AFS-300

NOTE: AFS-1, based on the Certificate Holding District Office's recommendation, will have the principal inspector amend or reissue the operations specifications.

C. *Document Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

CHAPTER 44 INSPECT FAR PART 135 (10 OR MORE) OPERATOR'S MAINTENANCE RECORDS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3358

B. *Avionics:* 5358

3. OBJECTIVE. This chapter describes the process used to inspect an operator's aircraft maintenance records under FAR § 135.411(a)(2).

5. GENERAL

A. Aircraft maintenance records include any records that document the performance of work on an aircraft. An operator's aircraft maintenance records must be periodically inspected to ensure that they meet the requirements of the operator's approved recordkeeping system.

B. *Surveillance Criteria.* While inspecting an operator's aircraft maintenance records, principal inspectors must determine that all the work was based on FAA approved or accepted instructions, procedures, or information. Such data can be in the form of:

- Manufacturer's manuals
- Service bulletins
- Service letters
- Data included in the operator's approved inspection and/or maintenance programs
- Approved Engineering Orders or Authorizations
- Airworthiness Directives
- Other accepted documents

C. *Personnel Identification Recording Requirements.* The certificate holder's manual must provide for a positive means of identification, such as an employee identification number, for any person performing or approving work.

7. RECORD REQUIREMENTS

A. *Retaining Airworthiness Releases.* Records for each airworthiness release must be retained until either the work is repeated or superseded by other work, or for one year after the work is performed.

B. *Total Time in Service Records*

(1) The total time in service record is a record starting from the date of manufacture and continuing through the life of the aircraft.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(2) When an engine is rebuilt and certified to zero time, the total time in service becomes zero per FAR § 91.421 {91.175}.

C. *Life Limited Parts.* Operators must have a current record of the status of life limited items. This record shows the present accumulated time in service of each life limited item.

NOTE: Life limited parts may not be rebuilt and certified to zero time.

D. *Records of Overhaul.* An operator must maintain overhaul records of any item required to be overhauled. These records must be maintained until the work is superseded or repeated by work of equivalent scope and detail.

E. *Inspection Status.* Inspection status defines the work that has been and is scheduled to be performed according to the inspection or maintenance program. The inspection status records should show the following:

- Type of most recent inspection
- The time at which that inspection was performed
- The time since the most recent inspection expressed in terms of hours, cycles, or calendar time
- The scheduled time and type of next inspection

F. The operator must maintain the current status of all applicable Airworthiness Directives for the operator's equipment. Some acceptable sources of procedures for compliance with Airworthiness Directives are:

- Service bulletins
- Service letters
- Specific instructions provided in the Airworthiness Directive
- Approved Engineering Orders or Authorizations

G. An operator must retain a list of all major alterations and major repairs.

NOTE: AFS-330 is developing additional clarification on the maintenance record requirements for major repairs and major alterations.

9. REPAIR STATION RECORDS OF WORK PERFORMED ON OPERATOR'S AIRCRAFT. Since repair stations only have to retain records of work performed for two years, some operators have reported that maintenance records are not always available from repair stations beyond the two year retention period. Since the operator is always responsible for obtaining and retaining the records required by the Administrator, operators should be advised to require a copy of the work documentation from the repair station at the time that the work is performed.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 135
- Successful completion of the Airworthiness Inspectors Indoctrination String Course or equivalent
- Familiarity with the type of operation being inspected

B. *Coordination*

(1) This task requires coordination between the principal inspectors and the operator.

(2) If the task is performed by the office with geographic responsibility, coordinate with Certificate Holding District Office principal inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 39, 43, 65, and 145

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review the Office File*

B. *Inspect the Maintenance Records.* Ensure the operator has retained the required maintenance/alteration/-inspection records for each aircraft, including airframe, engine, propeller, rotor, and appliances. These records should include the following:

(1) A description of the work performed (data acceptable to the Administrator), including the date of completion

(2) The name of the person performing the work if that person is not an employee of the operator

(3) The name or other positive identification of the person approving the work

C. *Inspect the Operator's Record System.* Inspect the records to ensure that manual procedures are being followed. During the inspection, document and photocopy any problem areas, obvious omissions or apparent discrepancies. The records checked should include the following:

(1) *Airworthiness releases*

(a) Ensure that the operator retains the airworthiness release records until the airworthiness release is repeated or superseded, or for at least one year.

(b) Ensure that the airworthiness release signature is authorized by the operator.

(c) Review the signer's training record to ensure the person is trained to the level identified in the operator's manual.

(2) *Flight/Maintenance logs.* Obtain and review the flight/maintenance logs to determine the effectiveness of the airworthiness release procedures following scheduled inspections and non-routine maintenance. Review the records to ensure the following:

(a) Flight discrepancies are entered after each flight

(b) Corrective actions are related to the discrepancy

(c) Corrective actions and sign-offs are entered in the maintenance record per manual procedures

(d) Repetitive discrepancies are handled per the manual procedures

(e) Deferred maintenance as authorized by the Minimum Equipment List (MEL) is deferred per the operator's MEL and manual instructions

(f) Required Inspection Items (RII) are signed off per the manual instructions and the inspector was authorized by the operator to perform the inspection

(3) *Scheduled inspections.* Select or obtain work packages for scheduled inspections and ensure the following:

(a) That scheduled inspections are properly signed off

(b) That generated non-routine items are properly signed off

(c) That Required Inspection Items are properly identified and signed off by properly authorized, qualified, certificated, and trained personnel

(d) That repairs are categorized correctly (major or minor) and that approved data is being used

(4) *Total time in service records.* Compare the manual procedures with the actual accomplishment of the total time/cycles in service records for the airframe, engine, propeller and rotor.

(a) Select and obtain a total time/cycles inservice record for a sample number of aircraft to ensure that cumulative flight times/cycles are added to the record.

(b) Make a spot check of the cumulative total time/cycle in service against the flight logs to ensure that daily entries correspond to the flight log.

(c) If the operator maintains a handwritten maintenance record for engines, compare the record entries to the aircraft flight log entries for the following:

- Overall accuracy

- The possible transposition of flight time/cycles in service, numbers, etc.

(5) *Life limited parts records.* Compare the manual procedures for life limited parts with the actual recording of the current status of life limited parts. Select a random sample of records and ensure the following:

(a) All life limited parts described on type certificate data sheets or in a manual referenced on the type certificate data sheets are noted

(b) The current status of each part is provided, to include:

- Total operating hours/cycles accumulated
- Life limit (total service life)
- Remaining time/cycles
- Modifications

(c) The time/cycles limits on the operator's list are the same as those on the type certificate data sheets

(d) Life limits have not been exceeded. Select a sample of life limited items that have been installed within the last 12 months and review records to ensure that life limited time was carried forward from the previous service record.

(e) If overhauled, the overhaul record is available

(f) The life limit of an item has not been changed as a result of the overhaul

(6) *Overhaul records.* Compare the manual procedures for maintaining the overhaul record with the actual overhaul record content.

(a) Select a random sample of overhauled items to ensure the following:

- Overhaul records are available for those items selected
- The records contain a description of the overhaul
- The item was overhauled according to the overhaul specifications by a qualified and authorized person
- The component was approved for return to service by an authorized person

(b) Review the removal/installation records of overhauled components to determine if the overhaul was accomplished within the authorized time limits. Current regulations require that these records be maintained until the work is superseded by work of equivalent scope and detail or one year.

(7) *Inspection status records*

(a) Compare the manual procedures for maintaining the current aircraft inspection status with available records to ensure that daily flight hours/cycles are used to obtain the current inspection status.

(b) Take a random sample of aircraft inspection records to ensure that scheduled inspections times/cycles were not exceeded (overflown).

(8) *Airworthiness Directives.* Request a random sample of aircraft Airworthiness Directive compliance records to ensure the following:

(a) The records contain all applicable Airworthiness Directives for the sampled aircraft

(b) That Airworthiness Directive requirements were accomplished within the effective times of the Airworthiness Directive

NOTE: Special emphasis should be put on checking recurring Airworthiness Directives.

(c) The Airworthiness Directive record contains current status and method of compliance. The current status must include the following:

- A list of all Airworthiness Directives applicable to the aircraft
- The date and time of compliance
- The time and/or date of next required action (if recurring Airworthiness Directive)

(d) The record is being retained indefinitely

NOTE: If any Airworthiness Directives have an alternative method of compliance, ensure the operator has obtained prior approval for that alternative method.

(e) The method of compliance is the same as specified in the Airworthiness Directive

(f) The date of compliance is identical to the date on the current status list

(g) The mechanic/inspector was properly trained and authorized to accomplish the work

(h) The accomplishment was properly signed off

(9) *Major alteration and major repair records*

(a) Compare the manual procedures for maintaining a list of major alterations and major repairs with the actual work records.

(b) Compare a random sample of major repair and alteration work records to the major alteration and repair list to ensure the following:

- The list and/or reports contain the date of accomplishment and a brief description of the work
- The respective maintenance records show that the work was accomplished according to approved data

D. *Analyze the Findings.* Evaluate all deficiencies to determine if corrective actions will be required.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task may result in the following:

- If the inspection was performed by the office having geographic responsibility, a report of any deficiencies submitted to the Certificate Holding District Office
- A letter from the Certificate Holding District Office informing the operator of the results of the inspection
- Enforcement Investigation Report, as applicable

C. *Document the Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

[CHAPTERS 45 THROUGH 59 RESERVED]

[CHAPTERS 45 THROUGH 59 RESERVED]

CHAPTER 61 INSPECT FAR PART 125 OPERATOR'S MAINTENANCE RECORDS

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3358

B. *Avionics:* 5358

3. OBJECTIVE. This chapter describes the process of inspecting an operator's airplane maintenance records under FAR Part 125.

5. GENERAL

A. Airplane maintenance records include any records that document the performance of work on an airplane. An operator's airplane maintenance records must be periodically inspected to ensure that they meet the requirements of the operator's approved recordkeeping system.

B. *Surveillance Criteria.* While inspecting an operator's airplane maintenance records, principal inspectors must determine that all the work was based on instructions, procedures, or information that has been previously approved or accepted by the FAA. Such data can be in the form of:

- Manufacturer's manuals
- Service bulletins
- Service letters
- Data included in the operator's approved airplane inspection program
- Airworthiness Directives
- Other accepted documents

C. *Personnel Identification Recording Requirements.* Since FAR Part 125 operators do not have the authorization to approve an airplane for return to service, the name(s), address(es), and certificate number(s) of the person(s) performing the work and the person(s) approving the work must be recorded. These personnel must be listed in the operator's manual.

7. RECORD REQUIREMENTS

A. *Retaining Airworthiness Releases.* Records for each airworthiness release must be retained for at least 60 days.

B. *Total Time in Service Records*

(1) The total time in service record is a record starting from the date of manufacture and continuing through the life of the airplane.

NOTE: Due to the renumbering of FAR Part 91, this chapter contains the old FAR Part 91 section numbers in brackets {}, following the revised section numbers.

(2) When a rebuilt engine is certified to zero time, the total time in service becomes zero (reference FAR § 91.421, {91.175}) Do not confuse this with zero time since overhaul as this is referring to the current overhaul status and does not affect total time in service.

C. *Life Limited Parts.* Operators must have a current record of the status of life limited items. This record shows the present accumulated time in service of each life limited item.

D. *Records of Overhaul.* An operator must maintain overhaul records of any item required to be overhauled by the operator's inspection program. These records must be maintained until the work is superseded or repeated by work of equivalent scope and detail.

E. *Inspection Status.* Inspection status defines the work that has been and is scheduled to be performed according to the inspection program. The inspection status records should show the following:

- The time since the most recent inspection expressed in terms of hours, cycles, or calendar time
- The scheduled time and type of next inspection

F. *Airworthiness Directives.* The operator must maintain the current status of all applicable Airworthiness Directives for the operator's equipment. Some acceptable sources of procedures for compliance with Airworthiness Directives are:

- Service bulletins
- Service letters
- Specific instructions provided in the Airworthiness Directive

G. *Major Repair and Major Alteration Records.* Applicants are required to retain the records of each major repair/alteration to an airplane, to include the following information:

(1) *Major repair records:*

- A description of the work performed with approved data
- The date of completion of the work performed
- The signature, type of certificate, and certificate number of the person approving the airplane for return to service

(2) *Major alteration records:*

- A description of the work performed with approved data
- The date of completion of the work performed
- The signature, type of certificate, and the certificate number of the person approving the airplane for return to service

9. REPAIR STATION RECORDS OF WORK PERFORMED ON OPERATOR'S AIRPLANE. Since repair stations only have to retain records of work performed for two years, some operators have reported that maintenance records are not always available from repair stations beyond the two year retention period. Since the operator is always responsible for obtaining and retaining the records required by the Administrator, operators should be advised to require a copy of the work documentation from the repair station at the time that the work is performed.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Part 125
- Successful completion of the Airworthiness Inspectors Indoctrination String Course or equivalent
- Familiarity with the type of operation being inspected

B. *Coordination*

(1) This task requires coordination between the principal inspectors and with AVN-120, as applicable.

(2) If this task is performed by the office with geographic responsibility, coordinate with Certificate Holding District Office principal inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 39, 43, 65, and 145

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review the Office File*

B. *Inspect the Maintenance Records.* Ensure the operator has retained the required maintenance/alteration/-inspection records for each airplane, including airframe, engine, propeller, and appliances. These records must include the following:

(1) A description of the work performed (data acceptable to the Administrator), including the date of completion

(2) The name or other positive identification of the person approving the work

C. *Inspect the Operator's Record System.* Inspect the records to ensure that manual procedures are being followed. During the inspection, document and photocopy any problem areas, obvious omissions or apparent discrepancies. The records checked should include the following:

(1) *Airworthiness releases*

(a) Ensure that the operator retains the airworthiness release records for at least 60 days.

(b) Ensure that the airworthiness release signature is authorized by the operator, per FAR Part 43.

(c) Review the signer's training record to ensure the person is trained to the level identified in the operator's manual.

(2) *Flight/Maintenance logs.* Obtain and review the flight/maintenance logs to determine the effectiveness of the airworthiness release procedures following scheduled inspections and non-routine maintenance. Review the records to ensure the following:

(a) Flight discrepancies are entered after each flight

(b) Corrective actions are related to the discrepancy

(c) Corrective actions and sign-offs are entered in the maintenance record per manual procedures

(d) Repetitive discrepancies are handled according to the manual

(e) Deferred maintenance as authorized by the Minimum Equipment List (MEL) is deferred per the operator's MEL and manual instructions

(f) Required Inspection Items (RII) are signed off per the manual instructions and that the inspector was authorized by the operator to perform the inspection

(3) *Scheduled inspections.* Select or obtain work packages for scheduled inspections and ensure the following:

(a) That scheduled inspections are properly signed off

(b) That generated non-routine items are properly signed off

(c) That Required Inspection Items are properly identified and signed off by properly authorized, qualified, certificated, and trained personnel

(d) That repairs are categorized correctly (major or minor)

(e) That approved data is being used

(4) *Total time in service records.* Compare the manual procedures with the actual accomplishment of the total time/cycles in-service records for the airframe, engine, propeller and rotor.

(a) Select and obtain a total time/cycles in service record for a sample number of airplanes to ensure that cumulative flight times/cycles are added to the record.

(b) Make a spot check of the cumulative total time/cycle in service against the flight logs to ensure that daily entries correspond to the flight log.

(c) If the operator maintains a handwritten maintenance record for engines, compare the record entries to the airplane flight log entries for the following:

- Overall accuracy
- The possible transposition of flight time/cycles in service, numbers, etc.

(5) *Life limited parts records.* Compare the manual procedures for life limited parts with the actual recording of the current status of life limited parts. Select a random sample of records and ensure the following:

(a) All life limited parts described on type certificate data sheets or in a manual referenced on the type certificate data sheets are noted

(b) The current status of each part is provided, to include:

- Total operating hours/cycles accumulated
- Life limit (total service life)
- Remaining time/cycles
- Modifications

(c) The time/cycles limits on the operator's list are the same as those on the type certificate data sheets

(d) Life limits have not been exceeded. Select a sample of life limited items that have been installed within the last 12 months and review the records to ensure that life limited time was carried forward from the previous service record.

(e) If overhauled, the overhaul record is available

(f) The life limit of an item has not been changed as a result of the overhaul

(6) *Overhaul records.* Compare the manual procedures for maintaining the overhaul record with the actual overhaul record content.

(a) Select a random sample of overhauled items to ensure the following:

- Overhaul records are available for those items selected
- The records contain a description of the overhaul
- The item was overhauled per the overhaul specifications by a qualified and authorized person
- The component was approved for return to service by an authorized person

(b) Review the removal/installation records of overhauled components to determine if the overhaul was accomplished within the authorized time limits. Current regulations require that these records be maintained for one year or until the work is superseded by work of equal scope and detail.

(7) *Inspection status records*

(a) Compare the manual procedures for maintaining the current airplane inspection status with available records to ensure that daily flight hours/cycles are used to obtain the current inspection status.

(b) Take a random sample of airplane inspection records to ensure that scheduled inspections times/cycles were not exceeded (overflown).

(8) *Airworthiness Directives.* Request a random sample of airplane Airworthiness Directive compliance records to ensure the following:

(a) The records contain all applicable Airworthiness Directives for the sampled airplane

(b) Airworthiness Directive requirements were accomplished within the effective times of the Airworthiness Directive

NOTE: Special emphasis should be put on checking recurring Airworthiness Directives.

(c) The Airworthiness Directive record contains current status and method of compliance. The current status must include the following:

- A list of all Airworthiness Directives applicable to the airplane
- The date and time of compliance
- The time and/or date of next required action (if recurring Airworthiness Directive)

(d) The record is being retained indefinitely

NOTE: If any Airworthiness Directives have an alternative method of compliance, ensure the operator has obtained prior approval for that alternative method.

(e) The method of compliance is the same as specified in the Airworthiness Directive

(f) The date of compliance is identical to the date on the current status list

(g) The mechanic/inspector was properly trained and authorized to accomplish the work

(h) The accomplishment was properly signed off

(9) *Major alteration and major repair records*

(a) Compare the manual procedures for maintaining the major alteration and major repair records with the actual work records to ensure consistency with the approved procedures.

(b) Select and obtain a random sample of major repair and alteration work records to ensure the following:

- The records contain the date of accomplishment and a brief description of the work
- The records show that the work was accomplished according to approved data

D. *Analyze the Findings.* Evaluate all deficiencies to determine if corrective actions will be required.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task may result in the following:

- If the inspection was performed by the office having geographic responsibility, a report of any deficiencies submitted to the Certificate Holding District Office
- A letter from the Certificate Holding District Office informing the operator of the results of the inspection
- Enforcement Investigation Report, as applicable

C. *Document the Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

CHAPTER 105 INSPECT FAR PART 147 AVIATION MAINTENANCE TECHNICIAN SCHOOL

Section 1 Background

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3650/3659/3661

B. *Avionics:* 5650/5659/5661

3. OBJECTIVE. This chapter provides guidance for conducting surveillance of certificated Aviation Maintenance Technician Schools (AMTS).

5. GENERAL

A. *Inspections.* Certificated Aviation Maintenance Technician Schools must be monitored for adherence to their curriculums and continued compliance with the certification requirements and operating rules.

B. *Inspection Scheduling.* FAR § 147.43 allows inspection of a school at any time to determine its compliance with FAR Part 147.

(1) *Formal inspections.* The purpose of a formal inspection is to determine whether the school continues to meet the requirements under which it was certificated.

(a) Generally, there will be two formal inspections per year. The actual number of formal inspections may vary depending upon the FAA staffing and workload, the particular school to be inspected, and other factors. As a minimum, each school must have one formal inspection per year.

(b) At the inspection exit briefing, the school must be provided verbal notification of discrepancies found during the formal inspection. Within five working days, the exit briefing will be followed up with a written list of areas of non-compliance. The school must initiate immediate corrective action to demonstrate regulatory compliance and must provide the district office with written notification of the action taken.

(c) Before beginning subsequent inspections and surveillance of the school, the inspector will review the district office file to verify any previous deficiencies. The inspector will inspect the school to assure compliance in these areas.

(2) *Informal inspections.* Generally, an informal inspection will be less comprehensive than a formal inspection. This inspection may be unannounced at the inspector's discretion. The purpose of the informal inspection is to evaluate a specific area of the operating rule, or to ensure the program is effective.

(a) The frequency of informal inspections will vary according to the needs of the individual school and the FAA workload. As a minimum, however, there must be no fewer than two informal inspections per school year.

(b) The school must be notified in writing of deficiencies found during the informal inspection. The discrepancies shall be recorded and the record placed in the office file for reference and followup purposes.

NOTE: The inspector must explain to the school the time period within which the discrepancies must be corrected.

7. SURVEILLANCE OBJECTIVES

A. *Instruction Time.* Based on a variety of indicators, it is apparent that some schools do not provide the number of hours of instruction specified in their approved curriculums. One of the objectives of surveillance is to ensure that typical "time-loss" items do not affect curriculum hours.

(1) The inspector must be aware of the following:

- Instructors ill or on leave. In small schools this could result in classes being dismissed or students being sent to a room to study.

- Teachers' strikes
- Weeks during which students are scheduled for private study and/or testing outside of the approved curriculum
- Class outings that take time away from instructional hours
- Student achievement days, sports days, and special event days
- Teacher's meetings and grading days
- Absences beyond those permitted in the FAA-approved curriculum
- Classroom time spent on non-instructional activities such as school administrative work and pep rallies, etc.
- Any other activity that intrudes on instructional time

(2) Published school calendars, individual student enrollment schedules, student makeup schedules, and class schedules are good sources of surveillance infor-mation.

B. *Credit for Prior Instruction or Experience*

(1) School records must show the basis for crediting previous instruction or experience, including records of tests and copies of documents. School records also must indicate the exact curriculum subjects to which previous instruction is credited.

(2) FAR §§ 147.31(c)(1) and (2) allow credit for instruction satisfactorily completed at the following:

- An accredited university, college, or junior college
- An accredited technical school, trade school, vocational school, or high school
- A military technical school
- An aviation maintenance technician school, before or after its certification, other than the crediting school

NOTE: Accreditation as referenced in FAR Part 147 refers to schools accredited within the United States. Foreign aviation maintenance technician schools are not eligible for FAA certification. Therefore, no credit may be granted for prior instruction in foreign schools.

NOTE: FAR § 147.31(c)(1)(iv) must not be interpreted as requiring a student to retake the general portion of the curriculum after successfully completing one rating and enrolling in a course of study for the other rating. The General portion is not required to be taken twice, provided that it is clearly separate from both the Airframe and Powerplant portions and conforms to the requirements of FAR Part 147, Appendices A and B.

(3) The recordkeeping requirements of FAR § 147.33 for previous experience or instruction are applicable. See Vol. 2, Ch. 187 for details.

C. *Progress Records or Charts.* Progress records or charts need not show grades for practical laboratory work if these grades are available in another record.

D. *Transcripts.* The school must make grade transcripts available to the student regardless of whether the student graduates.

(1) The transcript must be clearly distinguishable from a graduation certificate and must be limited to only those subjects required by FAR Part 147.

(2) A student shall be issued a graduation certificate or certificate of completion only if all curriculum requirements have been completed, either by taking and passing the specified courses or by being properly credited with them.

E. *Quality of Instruction.* A school must provide instruction of such quality that during any 24-calendar month period a prescribed percentage of its graduates will be able to pass the appropriate FAA written test on the first attempt. See Vol. 2, Ch. 185.

(1) Corrective action may be indicated if the levels fall below those specified in FAR § 147.38(a).

(2) While poor test performance alone may not indicate poor instruction, it may indicate that some aspects of the school operation are inadequate or ineffective.

F. *Facilities.* School space usage must allow for appropriate separation of classes as specified in FAR § 147.15(a). See Vol. 2, Ch. 188 for details.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of FAR Parts 43, 65, and 147

B. *Coordination.* This task may require coordination with avionics inspectors.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Order 8300.5, General Aviation Job Function Reference Guide for Aviation Safety Inspectors (Airworthiness), as amended

B. *Forms*

- AC Form 8080-08, Aviation Maintenance Technician School Norms vs. National Passing Norms
- AC Form 8080-10, Aviation Maintenance Technician School Norms vs. National Passing Norms (Summary)
- AC Form 8080-13, Aviation Maintenance Test Applicant Listing
- FAA Form 8310-6, Aviation Maintenance Technician School Certificate and Ratings Application (inspection report section)

C. *Job Aids.* None.

5. PROCEDURES

A. *Review FAA Office Files Relating to the School*

(1) Review the school's approved curriculum.

(2) Check the inspection history, if applicable.

B. *Review Enrollment Records.* Determine that the number of students enrolled is not more than the number approved in the school's application. Determine that the school can effectively instruct the number of students actually enrolled.

C. *Review Student Records.* Determine whether records are available for all students. Select the records of one or two recently graduated students and one or two current students and perform a total verification ensuring:

(1) The attendance system shows the hours of absences allowed and make-up provisions for **subject material** missed

(2) The attendance system does not permit the time required to make up missed material to be deducted from regular instruction time

(3) The approved attendance system is followed

(4) Recordkeeping meets the requirements of FAR § 147.33

D. *Examine the System for Determining Final Course Grades.* Ensure the system reliably distinguishes between successful students and unsuccessful students. See Curriculum in Vol. 2, Ch. 187.

(1) Ensure all grade reports and records identified as part of the approved grading system meet the record-keeping requirements of FAR § 147.33.

(2) Ensure that the approved grading system is being followed.

E. *Ensure Maintenance of Instructor Requirements.* Determine whether instructor resources are adequate and effective, meeting the requirements of FAR § 147.36.

(1) Check the instructor/student ratio against the maximum allowable ratio of 1:25 in a shop or lab. If necessary, require a lower ratio in any shop or lab to provide adequate instruction and supervision of students.

(2) Determine that instruction given by specialized instructors is well-coordinated with aviation technical subjects, i.e., math instructors might teach weight and balance principles. Evaluate the suitability of non-certificated instructors to teach certain general courses on an individualized basis.

(3) Determine that the school has positive control over what is taught and when it is taught, in accordance with its approved curriculum.

(4) Observe classes and conduct interviews to determine individual instructor effectiveness. While it is permissible to talk to instructors and/or students in an ongoing lab or shop session, try to avoid disrupting any theory class while it is in session.

(5) As discussed in Vol. 2, Ch. 187, encourage the school to assess instructor performance regularly and provide for instructor improvement.

F. *Ensure School Space Usage Allows for Appropriate Separation of Classes in Session (FAR § 147.15(a)).* See Vol. 2, Ch. 188.

G. *Examine the Aviation Maintenance Technician School Norm Vs. National Passing Norms (AC Form 8080-08) to Identify Any Deficiencies.* Determine the cause(s) of poor test performance and discuss with the school ways of improving the overall school program. See Vol. 2, Ch. 185 for guidance in the use of the National Passing Norms. Obtain from the school records the names and graduation dates of all graduates for the 24-month period desired. Ensure the ending date of the 24-month period is at least 60 days prior to the current date.

(1) For a record search to obtain subject grades for each individual, forward the list of names and graduation dates to:

Aviation Standards National Field Office
Maintenance Support Branch, AVN-140
P.O. Box 25082
Oklahoma City, OK 73125

(2) If the record search indicates significant deviation from the norm, initiate corrective action.

(3) If the AMTS does not take corrective action, or their response is unsatisfactory, initiate enforcement action.

7. TASK OUTCOMES

A. *Notify the School in Writing of Any Deficiencies Found During the Inspection*

B. *Complete a PTRS Transmittal Form*

9. FUTURE ACTIVITIES

A. Ensure that any deficiencies have been corrected.

B. If necessary, increase surveillance.

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1. Current Action Notices. The following chart includes Action Notices in four basic categories. The first grouping is of Action Notices that have been incorporated into the text of Order 8300.10, Airworthiness Inspector's Handbook. The second list enumerates Action Notices that are applicable to the airworthiness inspector's function and are not yet incorporated into the text of handbook chapters. The third group deals with inspection requirements, and the final set are Action Notices that provide information not appropriate for inclusion in the handbook. Action Notices from the 8130 series apply to Order 8130.2, Certification Handbook, as amended, and, with a few exceptions, are not listed and will not be incorporated into Order 8300.10.

INCORPORATED INTO THE HANDBOOK

AN#	Handbook Vol./Ch.
8000.2	Vol. 2 Chapter 162
8000.9	Vol. 3 Chapter 142
8000.11	Vol. 2 Chapter 22
8000.12	Vol. 3 Chapter 115
8000.16	Vol. 2 Chapter 241
8000.18	Vol. 2 Chapter 241
8000.25	Vol. 2 Chapter 84
8000.33	Vol. 2 Chapter 76,241
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8000.40	Vol. 2 Chapter 84
8000.42	Vol. 2 Chapter 2
8010.3	Vol. 3 Chapter 128
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8300.1	Vol. 2 Chapter 101 thru 111
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TO BE INCORPORATED

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8000.25	Vol. 2 Chapter 84
8000.33	Vol. 2 Chapter 76,241
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8000.37	Vol. 2 Chapter 236
8000.40	Vol. 2 Chapter 84
8000.42	Vol. 2 Chapter 2
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8300.18	Vol. 3 Chapter 11
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8300.24	Vol. 3 Chapter 38

TO BE INCORPORATED

AN#
8000.4
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8000.41
8010.2
8100.6
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8110.5
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8000.45	8110.11
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8110.20	8110.15
	8110.18
8300.5	8110.19
8300.7	
8300.16	8130.2
8300.17	8130.4
8300.18	8130.8
8300.19	8130.9
8300.21	8130.10
8300.22	8130.12
8300.25	8130.13
8300.27	8130.27
8300.31	8130.30
8300.33	8150.2
8300.40	
8300.42	8260.3
8300.43	8260.5
8300.45	8260.6
8300.46	8260.7
8300.48	
8300.49	8300.3
8300.52	8300.8
8300.55	8300.10
8300.57	8300.28
8300.59	8300.30
8300.60	8300.35
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CHAPTER 3 COMPARISON BETWEEN OLD AND NEW HANDBOOK

1. ORDER 8300.9, AIRWORTHINESS INSPECTOR'S HANDBOOK, COMPARED TO ORDER 8300.10, AIRWORTHINESS INSPECTOR'S HANDBOOK. The following chart delineates specific chapters of Order 8300.9 and gives the equivalent chapters in Order 8300.10. Where there is a listing only for Order 8300.9, that guidance should be used until such a time as equivalent guidance is provided in Order 8300.10. Where there is a listing only for Order 8300.10, that guidance is new information that was not available in Order 8300.9. In all new cases in which there is a listing for both orders, Order 8300.10 always supersedes Order 8300.9. Concerned individuals who believe there is additional material in Order 8300.9 that should be incorporated into Order 8300.10 are encouraged to fill out and send in the Inspector Feedback Card, in Appendix 2 of Order 8300.10.

2. COMPARISON CHART

NOTE: PTRS Codes: 3xxx=Maintenance Activity
5xxx=Avionics Activity

PTRS#	Task Description	8300.9 Chapter-Section	8300.10 Vol.-Chap.
	General Information		1-1
	FAA Regulatory Responsibility		1-2
	General Process for Approval/Acceptance		1-3
	Generic Process for Certificating Organ.		1-4
	Preparation of FAA Operating Certificates		1-5
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	Environmental Consideration/Responsibilities		1-7
	Exemptions, Deviation, Waivers, Authorizations		1-8
	Interior Inspection Guidelines		3-1
	Exterior Inspection Guidelines		3-1
	Comparison Chart-Changes to Part 91		4-1
	Comprehensive Index Vol. II & III		Appendix 1
	Inspector Feedback		Appendix 2
x350	Ground Air Carrier AC	6-31	3-6
x410	Issue AC Condition Notice	7-3	3-124
x456	Process Malfunction/Defect Report	6-34	3-129
x322	Process 121/135 MIS Report	6-34	3-130
x325	Process Service Difficulty (SDR)	6-34	3-128
x321	Process AC/Engine Utilization Report	6-17	2-78
x346	Review Engineering Change Auth	----	2-79

PTRS#	Task Description	8300.9 Chapter-Section	8300.10 Vol.-Chap.
x812	Develop MMEL on FOEB	6-15	
x418	Evaluate MEL (91)	6-15	2-37
x312	Evaluate MEL (Air Operator)	6-15	2-37
x373	Evaluate MEL (141)	6-15	2-37
x312	Evaluate MEL (125)	6-15	2-109
x312	Evaluate MEL (129)	6-15	2-129
x399	Provide Technical Assistance	----	2-220
x402	Issue Airworthiness Cert./Standard	3-16	2-225
x406	Issue Airworthiness Cert./Special	3-16	2-225
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INSPECTOR FEEDBACK SHEET

Subject: Order 8300.10, Airworthiness Inspector's Handbook

To: Manager, Technical Standards Branch, AFS-370
through Regional Handbook Standardization Representative
Telemail address: AFS370

(Please check all appropriate items.)

[] An error (procedural or typographical) has been noted in Volume _____, Chapter _____, Section _____, paragraph _____ on page _____.

[] Recommend paragraph _____ in Volume _____, Chapter _____, Section _____, page _____, be changed as follows: *(Attach separate sheets if necessary.)*

[] In a future change to this directive, please cover the following subject *(briefly describe what you want added):*

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